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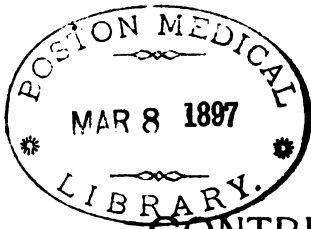
A BI-WEEKLY JOURNAL OF

MEDICINE AND SURGERY.

"Dec Tenet Penus."

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VOLUMES XXI AND XXII—1896.



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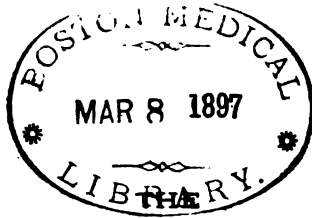
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AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXI.

LOUISVILLE, KY., JANUARY 11, 1896.

No. 1.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

HISTORICAL SKETCH OF THE ETIOLOGY OF CHANCROIDS.*

BY I. N. BLOOM, A. B., M. D.

Clinical Professor of Genito-Urinary Diseases, University of Louisville; Dermatologist, Louisville City Hospital, etc.

There lies before me as I read this paper the three books which represent the prevailing ideas on the cause of chancroids for three centuries. The first, by John Hunter, "A Treatise on the Venereal Disease" (written in 1786), published in Philadelphia in 1791, represents the prevailing opinion for at least two centuries as to identity of causation of blennorrhea, syphilis, and chancroid. During Hunter's lifetime the identity of syphilis and gonorrhea was denied most vigorously by Benjamin Bell, but it remained for Ricord (*Traité Pratique des Maladies Vénériennes*, Paris, 1838,) to prove conclusively the difference between these two widely differing diseases.

The second book from my library is the translation of Ricord's work just mentioned (New York, 1852), in which he bases his differential diagnosis as between blennorrhea and syphilis on numerous inoculations, the details of which are given almost without comment, so clearly do they show the distinction between the two diseases. The difference

Clerc, another disciple, recognized the difference between the two lesions, but claimed the former to be the result of inoculation of syphilitic virus on one suffering from syphilis or who has already had it. Hence he gave it the name chancroid, showing in the nomenclature his ideas of the intimate relationship between the two lesions.

The third book, a great one, by our compatriot Robert W. Taylor, "Venereal Diseases" (Lea Brothers, September, 1895), treats of chancroid as a septic ulcer derived from pyogenic microbes, not necessarily from chancroids, and demonstrates, to my satisfaction at least, and I hope, later, to yours, that a chancroid is not necessarily derived from a chancroid, and that therefore our preconceived idea as to the specific origin of chancroid, as being a distinct disease produced by a distinct micro-organism, is fallacious.

I need offer no apology to this learned body if I read a few extracts from the books before me in order to show the prevailing opinions of the eras enumerated. It may not be as entertaining as the 'report of a few cases,' but I feel certain it will be far more instructive.

"Venereal matter (says Hunter, pages 12 and 13,) must in all cases be the same; one quantity of matter can not have a greater degree of poisonous matter than another, and if there is any difference it is only in its being more or less diluted, which produces no difference in its effects." "The variation of the symptoms of different persons depend upon the constitution and the habits of the patient at the time."

As I have previously mentioned, even in Hunter's time the identity of the only two recognized venereal diseases was contested, although with no great force. Taylor mentions, besides Bell, Astruc, 1740, Balfour, 1767, Swediaur, 1801. To these Hunter answers (page 13): "It has been supposed by many that the gonorrhea and the chancre arise from two distinct poisons; and their opinion seems to have some foundation when we consider only the different appearances of the two symptoms and the different methods of cure; which, with respect to the nature of many diseases, is too often all we have to lead our judgments." He goes on boldly to challenge contention by saying: "Yet,

them as a sort of literary curiosity to the men of to-day who are too busy to read the works of the old masters, and to show how lax must have been the clinical observations of that time.

Page 12: "That the venereal disease is to be propagated only by matter is proved every day by a thousand instances. Married men contract the disease, and, not suspecting that they have caught it, cohabit with their wives even for weeks. Upon discovering symptoms of the disease they of course desist; yet in all my practice I never once found that the disease was communicated under such circumstances, except where they had not been very attentive to the symptoms, and therefore continued the connection after the discharge had appeared. I have gone so far as to allow husbands while infected, but before the appearance of discharge, to cohabit with their wives in order to save appearances, and always with safety. I could carry this still further, and even allow a man who has a gonorrhea to have connection with a sound woman, provided that great care be taken to clear all the parts of any matter by first syringing the urethra, making water, and washing the glans."

Hunter seems to include chancroid under chancre, and to the systemic lesion he attributes the old name, lues venerea. This is most clearly shown in the following quotation, and will serve as an epitome of Hunter's and the general idea of the sixteenth, seventeenth, and eighteenth centuries of the etiology of venereal diseases. (page 15):

"The following case is an instance of a gonorrhea producing a lues venerea: A gentleman twice contracted a gonorrhea of which he was cured both times without the use of mercury. About two months after each he had symptoms of the lues venerea; those in consequence of the first infection were ulcers in the throat which were removed by the external application of mercury; the symptoms in consequence of the second were blotches on the skin, for which also he used the mercurial ointment and was cured. With regard to the lues venerea proceeding from chancres, instances occur so frequently to every one's observation as to require no further proof here."

Before the occurrence of the epidemic of syphilis in 1494 literature contains many descriptions that show that chancroid was well recognized in itself and differentiated from gonorrhea. Yet from the middle of the sixteenth to the middle of the nineteenth century its origin was supposed to be identical with that of syphilis, to say nothing of its confusion with gonorrhea.

In taking up the second book, in which the great Ricord (*On Venereal Diseases*) successfully differentiates syphilis from gonorrhea, a perusal of the first chapter must strike with astonishment any one familiar with venereal diseases to-day, by the curious results obtained by inoculations practiced by those who sought to refute the arguments which Ricord deduced from them. These men were the foremost medical men of the day, and it is but fair to attribute to them the true scientific spirit of research and honesty. Ricord refuses the latter tribute to some, but it must be remembered he was engaged in a most spirited warfare with them.

I will confine myself simply to the inoculation experiments of his opponents and their amazing results, reminding you that the bulk of the profession believed still with Hunter that the etiology of all venereal diseases was the same, and that the manifestations differed on grounds already detailed.

Page 20: In 1824 M. Dubled was inoculated on the middle of the dorsal surface of the forearm with syphilitic virus from a chancre of the glans and some purulent matter from the urethra. It cicatrized. It was done with a lancet at the Venereal Hospital by MM. Hutie and Cazoviel. On the second day it had cicatrized—never after was heard from.

"M. Bertin has never been able to produce syphilis by inoculation, although he has tried on several individuals."

Hecker (cited by Ricord, foot note, p. 17,) states that Bertin, Cullevier, and Gilbert repeatedly endeavored to inoculate the virus of gonorrhea and chancre, and were never able to produce a single symptom, "whence follows the conclusion that these diseases are only to be communicated by coition."

M. Jourdain (*l. c.* p. 15) adds "that Mr. Evans declares that he has several times tried the inoculation of a gonorrhea upon himself without success; and the inutility of these attempts, which have also failed in the hands of other experimenters, is very remarkable, as it shows that the efficacy of the venereal pus is in this respect very inferior to that of hydrochlorate of ammonia."

This same M. Jourdain cites one of his experiments which I regard

produced a chancre (?); the other was without effect. It is very remarkable that pus coming from a consecutive ulcer, and consequently highly venereal, produced nothing, while the mucus from urethritis, a disease whose syphilitic nature is generally denied by writers, produced a chancre."

We know that the production of a true chancre on one suffering from active syphilis is an impossibility. The lesion produced in this instance must therefore have been a chancroid, must have been produced by the pyogenic microbes in the mixed urethral pus, and is an example of a chancroid produced on a syphilitic from pus not taken from a chancroid.

I will not further weary you with fallacious experiments and the controversies into which Ricord was forced to engage in proving the truth of what had been known three hundred years before, and forgotten in the intervening period, that inoculation with the products of chancre produced syphilis, and that similar experiments on the epidermis with the products of urethritis, pure and simple, produced only negative results and never syphilis. This was a great step toward the evolution of the etiology of chancroid, and it is not so surprising, even disregarding the assistance that the science of bacteriology has been, that the complete emancipation of the chancroid from its association with the chancre and its real causation should have been the product of the last forty years. No one can read Ricord's book, published in 1838, without believing that he knew the difference between chancroid and chancre; it is evident in any number of instances. Yet nowhere did he publish any such knowledge previous to Bassereau, whose priority he acknowledged.

According to Taylor (*l. c.*) Bassereau founded his claim to a distinct origin for these two diseases:

1. On the history of the venereal sores precedent and antecedent to the syphilitic epidemic after 1494.

2. Upon confrontation in several hundred cases in which he proved that when the disease was local in the giver it was local in the recipient.

After Bassereau, Rollet, of Lyons, established the theory of a specific virus for chancroid, and laid the foundation for the so-called dualists as opposed to the unicists, who still maintain that the hard sore and the soft, the chancre and chancroid, were each under certain conditions capable of producing syphilis. The dualists maintained that syphilis was produced by a virus which could produce syphilis and syphilis

only ; that chancroids were produced by another specific virus which always produced chancroids, and hence that chancroid could be differentiated from any other sore by the presence of this specific virus, and could not originate *de novo*. Essentially the affirmation was and is made by them, that if every chancroid in the world were removed chancroids would forever disappear from the face of the earth.

A blow was given to the dualists when it was found that the secretion (purulent) of chancres could be inoculated on their bearers and an ulcer produced differing in no respect from those of chancroid. These cases, it was claimed by the dualists, were cases of mixed chancres, in which the lesion combined the poisons of both diseases, and for many years, and even by many to-day, this was believed to be the true condition of affairs.

We know that a syphilitic lesion treated with absolute surgical cleanliness will not produce pus, but only serum or sero-mucus, and these latter will not, can not produce chancroid by inoculation on their bearers. On non-syphilitics such inoculations will produce syphilis. If by uncleanness or a lack of thorough asepsis pus is produced on a chancre, that pus is produced by the ordinary pyogenic microbes, has been added to the original chancre and is not a part of it. Any chancre, when irritated by sanious or pus-producing material, will secrete a pus which may safely be inoculated upon a non-syphilitic with the production of a typical chancroid, which in turn can be inoculated through several generations. To Taylor's mind this is one of the proofs that chancroid has no special specific virus and may originate *de novo*.

The following case of Danielssen's, mentioned by Taylor (page 25), will serve as a clinical illustration :

"A man thirty years old, free from syphilis, was inoculated three hundred and ninety-three times with pus derived from irritated hard chancres and was not rendered syphilitic. Later on he was inoculated directly with the natural secretion of a hard chancre and became the victim of syphilis."

Another illustration, that of Bedenkep, quoted by the same author, is very convincing: "It was that of a non-syphilitic woman, suffering from gonorrhea, who inoculated herself from the pus derived through several generations from an initial syphilitic lesion, with the result of producing a sore identical with chancroid, the secretion of which was accidentally auto-inoculated with success. At this time the woman was not inoculated with syphilis, but a year and a half later she became infected."

Syphilitic subjects, particularly those in whom the syphilis is active, are unusually prone to suppurative inoculations, as was proved by Pick in 1865. He inoculated simple non-vénereal pus from acne, scabies pustules, etc., and on them produced ulcers in all respects identical with chancroid, the matter of which was inoculable through several generations.

The most convincing clinical case of chancroid derived from irritated syphilitic lesion on a non-syphilitic is that offered by Taylor. He says: "It was my good fortune early in 1870 to observe an undoubted and uncontrovertible case in which chancroids were contracted by a non-syphilitic woman from irritated lesions resembling chancroids in her syphilitic husband. This man, syphilitic in 1869, came in March, 1890, with a papular syphilide and acute gonorrhea. A few days later he came with a group of unruptured vesicles in the under surface of the prepuce near the frenum. He had not had coitus in three weeks. During the week following his gonorrhea remained active, and at the end of that time I found that the herpetic vesicles presented the appearance of oval, absolutely typical, chancroids. A few days later, his gonorrhea being on the decline, while intoxicated he had connection with his wife, who ten days later came to me with five large typical chancroids on the fourchette and inner aspect of the labia minora. The wife also was careless, and her chancroids became large and deep and gave rise to a typical bubo. The husband also had a chancroidal bubo. Two years later the woman contracted syphilis from a lover."

Finger (Taylor, page 28,) had a case of even greater importance. He took for his subject a woman suffering from leucorrhea and eczema. These affections were cured; the uterine and vaginal secretions were then demonstrated to be innocuous, and it was established beyond doubt that the woman was not suffering from chancroids. Further than this there had not been a case of chancroid in the hospital for several weeks. Every care was exercised that no contamination of the woman from without could occur. Finger then with the curette irritated the posterior vulvar commissure, and without cleansing or bandaging the parts he put the woman to bed. Inoculations with the scant secretion of this erosion were unsuccessful. Then Finger smeared the lesion over with powdered savine. On the following day there was an abundance of true pus, from which a series of successful inoculations were made upon the patient's thighs, which were further followed by an inflammatory bubo in the groin. A man was successfully inoculated with the

pus from the woman's thighs. Four more cases were experimented upon in like manner with similar results."

From these cases, that which has been written, and numerous clinical cases cited, Taylor comes to this as the logical deduction: "That while chancroid may be and very commonly is derived from a previous chancroid, a chancroidal bubo or chancroidal lymphangitis, it may also originate from the pus derived from irritated lesions of syphilis and from irritated simple lesions in syphilitic subjects, and also in simple pus, particularly when originating in active or intensely irritated lesions."

In other words, there is no special specific virus for chancroid, but it is derived from pyogenic microbes, which, of various kinds, are always to be found in the secretions.

While I am inclined to thoroughly agree with Taylor, and could offer not a few clinical cases to bear out his claims, I think it only fair to offer a résumé of the claims of the other side, those who to-day declare that not pyogenic microbes but a distinct micro-organism is the cause of chancroid, produces chancroid only, and no chancroid can exist without it.

I shall make use of the article on "Chancroid" by Edward Martin, published in *Morrow's System of Genito-Urinary Diseases*, etc. (1893), to state their case.

Before doing so, however, I will state that with my assistant, Dr. Brent Palmer, I am now engaged in certain inoculation experiments which I hope will throw further light on this subject.

Martin acknowledges that no specific bacilli of chancroid can be positively said to have been discovered, in spite of the claims of Ducrey, Jullien, Unna, and Ferrari. Nevertheless he believes firmly that a distinct micro-organism exists as the specific cause of chancroid, and that it will eventually be discovered, as will also that of syphilis. "In the vast majority of cases," says Martin, "chancroid arises from contact with the discharge of chancroid, and not from retained decomposing discharges. The chancroid runs its typical course in the persons of the most robust; often exhibiting no tendency toward self-limitation, and involving the anatomically associated lymphatic glands in degenerative processes with far greater frequency than is observed in simple suppurative processes. Auto-inoculation with the discharge of chancroid is more often successful, and can be repeated more frequently than is the case with ordinary pus.

"Such inoculation, practiced under modern antiseptic precautions,

may be repeated many times with a discharge of chancroids, the ulcers after the second generation showing none of the pyogenic micro-organisms, but only those which are held to be specific to the lesions.

"Repeated inoculation of ordinary pus often fails, or, if successful, produces a slight and evanescent lesion. Such inoculation can not be indefinitely repeated under antiseptic precautions. A rapidly extending chancroid, if thoroughly cauterized, is at once converted into a simple ulcer; and though in the discharge of the latter pyogenic microbes abound, yet the lesion runs a benign and self-limited course, essentially different from that characteristic of the chancroid."

LOUISVILLE.

TREATMENT OF TYPHOID FEVER.*

BY FRANK C. WILSON, M. D.

Professor of Diseases of the Chest and Physical Diagnosis in the Hospital Medical College of Louisville.

Assuming the specific nature of typhoid fever as shown by the demonstrated presence of the bacillus of Eberth, I will in the limits of this paper briefly consider the various methods of treatment as recommended by authors or tested in my own experience. Treatment may be considered under the following divisions: (1) Prophylactic. (2) Diagnostic. (3) Abortive. (4) Curative. (5) Symptomatic or expectant. (6) Treatment of complications or emergencies. (7) Management of convalescence.

By prophylactic treatment we mean the adoption of such measures as will tend to lessen the danger of the development of other cases. As the specific poison passes out with the alvine discharges, these must be thoroughly disinfected and never thrown into vault or sink, but rather burned or buried in the ground, taking care that this be done in such a situation as not to contaminate the water supply. The specific poison is not contagious in the sense that the virus of smallpox is, which is transmissible from one person to another. The typhoid poison must first go through a process of multiplication or propagation in a filthy soil before it can infect another patient. Recent observations have shown the presence of the typhoid bacillus in the urinary secretion, so that it is just as essential to disinfect this discharge as the fecal matters.

As every system is able to resist to some extent the invasion of dis-

*Read before the Louisville Medico-Chirurgical Society, November 15, 1895. For discussion see p. 18.

ease germs, the stronger and more vigorous the person may be, so much the more successful will be the resistance offered to the encroachment of disease. As a prophylactic measure, therefore, general tonics and supportives may be of great service. I am thoroughly convinced that in a number of instances I have succeeded in warding off typhoid fever by the timely administration of tonics and such remedies as nuclein or protonuclein.

For several days it is impossible to positively diagnose a case of typhoid fever. To differentiate it from malarial fever it is best to give what may be termed a short course of diagnostic treatment, viz., calomel, followed by full doses of quinine. If the course of the fever is uninfluenced by this, then most likely it is typhoid, and the quinine should be abandoned and the selected plan of treatment at once instituted and faithfully carried out.

The question naturally suggests itself whether it is possible by any plan of treatment to cut short or abort the course of typhoid fever? In answering or even discussing this question the accuracy of the diagnosis should be first carefully established. I recollect, many years ago, hearing a physician strenuously claim that he could cut short the course of every case of typhoid fever to two weeks' duration. I was satisfied that many of his cases recovering in two weeks were simply malarial remittent fevers which run their course in fifteen days, while others, genuine cases of typhoid, may have had fever for ten days or two weeks before they came under observation. The most widely known advocate of the abortive treatment is Dr. Woodbridge, of Ohio, who has written a great deal in the journals and read papers upon the subject at a number of medical meetings. The principle underlying Woodbridge's treatment is that of intestinal antiseptics applied as continuously as possible, the antiseptic tablets being administered every fifteen minutes for the first twenty-four or forty-eight hours. The tablet contains $\frac{1}{8}$ of a grain of calomel, the same quantity of menthol and guaiacol carbonate with the $\frac{1}{8}$ of a grain of resin podophyllum, a sufficient quantity of eucalyptol being used to form the mass. After a few days he substitutes a tablet (No. 2) differing from the first simply in the quadrupled quantity of the carbonate of guaiacol with the addition of the $\frac{1}{8}$ gr. of thymol; these tablets, however, being given less frequently, viz., every hour or two. After five or six days, when, as he claims, the fever will have subsided, the treatment is continued by the administration of a soft elastic capsule containing 3 grs. of carbonate of guaiacol, 1 gr. of thymol, $\frac{1}{2}$ gr. of menthol,

and 5 m. of eucalyptol, which should be kept up until all symptoms have disappeared and convalescence is fully established. The claims put forth for this plan of treatment are so great and the indorsements by those who have tested it are so numerous that we must conclude that there is some merit in it. Dr. John Aulde, of Philadelphia, states that he is able to abort cases of typhoid fever by the administration of nuclein in conjunction with arsenite of copper.

Other antiseptic agents, such as sulpho-carbolate of zinc, naphthol, etc., when used early and persistently, will, it is claimed, modify the severity of the disease and shorten its duration.

In my own experience in the management of typhoid fever during the past twenty years I have been guided by the following objects:

1. To eliminate as far as possible from the intestinal canal the poisonous germs producing the disease. No agent will accomplish this as satisfactorily as calomel, its use being not even contra-indicated by the existence of diarrhea. It may be given either in small doses at short intervals or in doses of two grains every four or six hours for two or three days.

2. To disinfect as thoroughly as possible the intestinal tract by the administration of five drops of spirits of turpentine either alone or in combination with guaiacol, eucalyptol, or tincture of iodine. This may be taken in a capsule every four or six hours throughout the entire course of the disease.

3. Lessen the temperature by appropriate means, realizing the fact that the tissue waste and wear and tear in the system are just in proportion to the height of the fever. This I accomplish (1) by the use of the rubber head coil, which not only helps to reduce the temperature but mitigates the headache, and lessens the tendency to delirium. (2) The abdominal coil placed over the location of Peyer's patches will not only abstract heat but lessen the tendency to intestinal hemorrhage. (3) By sponging the surface with alcohol, whisky, or vinegar whenever the temperature was above 102°. In conjunction with this the wet pack may be used or general bathing in water at 80° or 90°, gradually lowering it to 60° or 65°, or until the temperature of the patient is reduced below 100°. This must be repeated as often as it may be necessary to keep the temperature as low as 102°. The local use of guaiacol will also serve to reduce the temperature. The strength of the patient must be conserved by not allowing him to waste it by unnecessary exertion of any sort. This stock of strength must be added to by judicious

and careful feeding articles of diet easily digested and assimilated. Buttermilk I would rank first if the patient can be prevailed upon to take it. Sweet milk with the addition of lime-water, liquid peptones, beef tea, and broths would come next in order. The sweet milk being liable to the objection that it curdles in the intestinal canal, may be modified by pancreatizing it after Fairchild's method. Prepared in this way it is light and easily assimilated, and does not curdle in cheesy masses.

During the fourth week, when the range of temperature begins to widely oscillate, it is best to give quinine to the extent of twelve or fifteen grains in the forenoon. No solid food should be allowed until a week has elapsed after the fever has disappeared.

The emergencies which may arise requiring active treatment are first, intestinal hemorrhage, which, if it occurs at all, will usually come about the fifteenth day; second, perforation of one of the ulcerated Peyer's glands, producing great shock and general peritonitis. This may occur at any time during the later stages or even after convalescence has been established. Intestinal hemorrhage, the tendency to which is greatly lessened by the use of turpentine, may be suspected whenever the temperature suddenly drops to subnormal while at the same time the pulse becomes rapid and thready, and the surface bathed in a cold, clammy perspiration. The blood may not make its appearance in the actions for several hours after its escape from the vessels has commenced. As soon as hemorrhage is believed to have commenced, turpentine in half-dram doses should be given; ergotole used hypodermically; the ice-coil or ice-bag applied over the right iliac region. If the pulse is very weak stimulants should be used freely both internally and, if very urgent, hypodermically. The head must be lowered by elevating the foot of the bed upon chairs. Digitalis, strychnia, and nitroglycerine may be resorted to if the heart's action necessitates active support.

If perforation occurs the fatal termination usually supervenes before the physician has time to reach the bedside. Opiates in full doses with perfect rest and stimulants must be the reliance of the physician. If surgical assistance can be obtained laparotomy may be done as a last resort.

If heart failure is threatened use without stint stimulants, nitroglyc-

tion was practiced. To-day that little child, though practically dead several times, is well and hearty.

The simple plan of treatment above outlined I have pursued for the past twenty-five years, and the results have been so unexceptionally favorable that I have been unwilling to abandon it for newer and experimental methods.

LOUISVILLE.

ENDOMETRITIS.

BY J. H. REESOR, M. D.

In the treatment of endometritis or corporal endometritis, we would ask the questions:

1. Is it safe or advantageous to make intra-uterine medication?
2. If so, what curative agents shall we employ?
3. How shall they be applied?

Turning to the text-books or the current literature on the subject in search of an answer to the first question, I find the greatest diversity of opinion. The pioneer gynecologists of Europe, such as Jobert, Bennet, and Simpson, rarely if ever made applications beyond the os internum, believing that endometritis could be cured by treating the cervix and the cervical canal. On the other hand we find that Aran, Gautillon, and Dr. Henry Miller (who, by the way, was the first to employ intra-uterine medication in this country), Kemmerer, Nott, and many others relied to a very great extent on intra-uterine applications for the relief of corporal endometritis. All that can be learned from a review of the literature is that intra-uterine medication is more extensively employed than formerly. Believing that time tends to drift the profession to the side of correct therapeutics, it may be inferred that local applications to a part or a whole of the lining membrane of the uterine cavity are sometimes necessary, if not indispensable, in treating endometritis.

In seeking an answer to the second question, we encounter a variety of medical agents, ranging from the actual cautery to the blandest anodynes. Bearing in mind, however, that the second object to be gained, mainly to restore the organ to health and leave it uninjured, it is evident that all destructive agents should be avoided. Owing to the

risk, in making applications to the mucous membrane of the body of the uterus, intra-uterine applications, except to the cervical canal, should not be used until other means have been thoroughly tried and have failed.

In answer to the third question, we only have to say that the easiest and most effectual way of making applications to the body of the uterus is through Skeen's instillation tube.

The method generally in use of dipping a probe wrapped with cotton into the solution to be used, and passing that up into the canal, is very unsatisfactory. The cotton on the probe may injure the mucous membrane and the solution is deposited about the os externum, very little if any getting into the canal.

When from long continued congestion the mucous membrane of the cavity of the uterus becomes hypertrophied, giving rise to that condition known as endometritis-polyposa, the use of the curette gives the most prompt relief.

We can better express our views as to the operation of curetting by reporting a case:

Mrs. D., aged thirty-eight, mother of four children, youngest three years. Previous health good up to seven months prior to the time I was consulted. I found the patient very pale, weak, and anemic, with a history that some ten months previous her menstruation became irregular, coming on at the end of two or three weeks and continuing longer than normal, and was too free. At times the hemorrhage was so profuse that she was compelled to remain in bed during the period. On examination I found the uterus abnormally large, the increase in size being mostly of the body and fundus.

Speculum examination revealed os externum somewhat dilated, with a dark discharge coming from the canal. Sound entered two and a half inches, and could be moved about considerably in the cavity of the body, showing that the cavity was enlarged.

I first put my patient on Haydin's viburnum compound with ergot and a general tonic. Also made applications of carbolic acid and iodine to external os once a week, with hot water douche night and morning. This treatment was kept up for two months with some improvement of general health, but very little improvement in the profuse menstruation.

I then passed a medium-sized curette into the uterus and gently curetted the entire mucous membrane of the body. This brought away

a considerable quantity of serum and fungous material, with several shreds, which looked like portions of the epithelial layer of the softer membrane. I then passed a pencil of cocoa-butter and iodoform well up into the body of the uterus. Kept up tonic treatment. Her next period came on at proper time, but was yet too free. Five days after the flood had ceased I again curetted as before, removing some more fungous material. After the second operation with tonic treatment and the application of carbolic acid and iodoform to os externum, once a week for five weeks, the patient made a very good recovery.

STITHTON, KY.

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, November 15, 1895, Dr. W. L. Rodman, President, in the chair.

Dr. Curran Pope (present by invitation): This man is an electrical engineer, thirty-two years of age, in fair health all his life; clean family history, with the exception that at the time of his conception his father was said to be addicted to drink; no epilepsy or nervous trouble; the family is long-lived. At the age of ten he was thrown from a high wagon, falling on the top of the head; he was unconscious for two hours, then all right again. General functions normal; general cerebral functions in excellent condition; is very clear and concise in his answers. Careful examination of the motor functions show that his reflexes are very much exaggerated, and upon the left side there is ankle clonus; the knee-jerk on right side is fairly normal. His attacks commenced on the 23d of September, 1892, and are described by him as follows: "I was putting on some fastenings for electric light wires, and was on the upper part of a house between the floor and rafters. My left leg was hanging down between the rafters, and I felt it going to sleep. When I got down to the ground the weakness had extended as far as the hip. There was alternate flexion and extension of the leg and foot. The numbness extended until it reached the nipple, then I became unconscious and remained so for twenty minutes. When I became conscious again I vomited, and after remaining in bed two hours I felt all right."

Seven days afterward he had an attack similar to the one I have just described, with the exception that it involved the right side over the same area that was involved on the left side. About two months intervened between this and the next attack. During this time he received twenty grains of iodide of potassium. Inquiry revealed the fact that eleven years before he had had what was called "a soft chancre," but the secondary eruption appeared and he was then treated ten weeks for syphilis. Since he has been under the care of Dr. Cartledge he has been treated by enormous doses of iodide of potassium without any benefit whatever.

I examined sensation carefully and find that he responds to all forms, tactile pain, temperature and muscular, and also to "co-ordinated" sensations and recognized them; yet the tests must be made very slowly and must be prolonged, that is, there is a delayed appreciation of sensation. The case was a most typical one in my opinion. The diagnosis was made of a meningeal growth located over the leg center, probably within half an inch of the longitudinal fissure, extending backward into the trunk area. There is to my mind a very interesting connection to be traced in this case. There is no question in my mind but that the fall received at the age of ten caused the location of the trouble where it was.

Dr. A. M. Cartledge: As Dr. Pope has said, we had an intelligent man to deal with. The tumor was located over the leg center, as Dr. Pope stated. Two weeks ago Dr. Ray examined his eyes and reported that optic neuritis was present.

In making out the site of the tumor I used the mixed method embracing Keen's way of determining the point of the bregma, and Thane's rule for determining where the fissure of Rolando joins the central fissure, and lastly a rough method of my own for determining the course of the fissure of Rolando. Drawing a line from one ear to the other, and going one fourth of an inch in front of this, according to Keen giving the point of the bregma. Back two inches from this, according to Thane, in the median line marks the point at which the Rolando's fissure joins the superior longitudinal one. To get the di-

fissure of Rolando. These points were marked upon the shaved scalp with tincture of iodine. A large horseshoe shaped flap, with its base posterior and inferior, was turned down and a one inch and a half trephine placed well back of the supposed situation of the fissure of Rolando and as near the median line as safety would permit. On removing the button the dura at once bulged into the wound and presented every evidence of inflammatory changes of a chronic character. An incision about four fifths of an inch was made along the upper border of the trephine opening so as to admit a finger through the dura. Much to my delight I discovered a firm mass springing from the under surface of the dura beneath the trephine opening and dipping into the brain substance. This was loosened from its bed and a large pair of scissors passed down along the sides of the opening in the bone, giving a larger dural flap. This dural flap was turned down, bearing, as you see, the neoplasm attached to its under surface. It was found that the thickened dura projected a little below the point of attachment at the posterior inferior angle. The opening at the point was further enlarged by means of a Rongier forceps. There was some evidence of slight thickening in the dura adjacent to that bearing this central gumma.

The pericardium was sutured and a small iodoform gauze drain placed in the wound and the scalp flap retained in place by means of silk-worm gut sutures. The time of the operation, forty-four minutes, seemed to give rise to little shock, although the patient's condition was very weak prior to the anesthetic. He left the table with a pulse of 84, and he is now about recovered from the operation.

Dr. J. M. Ray: I have been very much interested in this case. I saw him first two months ago. At that time he had normal acuity of vision and there was no defect in the visual field. Three days ago I saw him for the second time, and found his acuity of vision still perfect. There was an undoubted neuritis of the right optic nerve and considerable distension of the retinal vessels in the left.

Such cases are exceedingly interesting, and I congratulate Dr. Cartledge on his success. This case still further emphasizes the point I have drawn your attention to on several occasions, that is, choked disc occurring in syphilitic subjects is the result of an intracranial growth, and not of primary optic neuritis. The subsequent ophthalmic examinations will be interesting here. Horsley claims that in all cases of choked disc, the result of intracranial pressure, the swelling is relieved

by trephining. I wish to emphasize the thought that optic neuritis is of no importance as a localizing symptom.

Dr. William Bailey: I would commend very fully the skill both in determining the location of this tumor and in removing it. The point made by Dr. Pope that the blow at the age of ten years had something to do with the localization of the trouble at this point I can not concur in. I examined the button. There is a depression on the external table, but none on the internal table, and I do not see how the fall could have had any influence. If I understood Dr. Pope correctly, the patient had the second manifestation in the second attack on the other side of the body. If the tumor was located as found by the surgeon, how is it that he had in the second attack involvement of the right leg.

Dr. A. M. Vance: I think Dr. Bailey is wrong in his point that the inner table must be injured, and that the fall upon the head had nothing to do with the situation of this tumor. There might have been an extra-dural clot left.

The operation was certainly a beautiful illustration of the fact that the location of cerebral tumors can be accurately diagnosed.

Dr. Pope: I believe the blow upon his head caused some obstruction to the circulation there, probably the closure of a few small blood-vessels with sufficient collateral circulation to make up for them. The involvement of the right side in the second attack may be explained by a temporary extension in the longitudinal fissure with pressure upon the corresponding leg centers. Or it may be possible the growth involved both sides, but to a less extent the left side, and that under treatment this cleared up.

The essay of the evening was read by Dr. Frank C. Wilson; subject, Treatment of Typhoid Fever. [See p. 9.]

Discussion. Dr. J. B. Marvin: I hardly know how to discuss the paper. It seems naturally to fall under two heads. The Doctor starts out by telling us what somebody else has done and then goes on to tell us what he has done, which is practically what all of us do. In the city it is not always practical to either burn or bury the discharges, it is certainly far easier to accomplish the same thing by chemical means. As to warding off typhoid fever, I do not believe it is possible. Typhoid fever is a specific disease; you have it or you do not have it. I think it is a very rash man who will claim that all fevers that do not yield in a day or two to calomel and quinine are typhoid, especially in children.

I see fevers lasting a number of days that do not prove to be typhoid, and do not yield to calomel and quinine in a day or two.

Then comes the point about Dr. Woodbridge and his treatment of typhoid fever. I heard his paper and the discussion at the meeting of the American Medical Association in Baltimore. I have tried to avoid that condition of slumber into which we all have a tendency to fall—having eyes we see not, and having ears we hear not. To me it is very remarkable that any one should say he has never lost a case of typhoid fever. It also seems to me that the enthusiastic therapist in his eager desire for intestinal asepsis, if he grants that typhoid fever is a disease due to a specific poison, should go further and study the life history of this parasite. He would find that it is not the multiplication of the typhoid bacillus in the contents of the alimentary canal alone which is responsible for the symptoms, but that this bacillus is a burrowing microbe, and attempts to destroy it by antiseptics are futile. We do not have digestion of any kind in the intestine without the aid of certain micro-organisms; if you get intestinal antiseptics which will kill the typhoid germs, will you not also kill the others upon which digestion is absolutely dependent?

Dr. Cartledge: It always seemed ridiculous to me that a drop of carbolic acid should disinfect sixteen feet of intestine. Most cases die from some complication. In the tympany and diarrhea which are seen in bad cases, I take it purgatives are indicated. I should like to say one word in regard to the treatment of hemorrhage. If we get our patient well from hemorrhage it must be by encouraging natural means of hemostasis by perfect quiet. It seems to me that to give these patients digitaline and strychnine only serves to wash out the clot in the bleeding vessel and to hasten death. I do not believe that it will ever be a legitimate procedure to operate upon cases of perforation. The mortality is one hundred per cent, and the dispute into which it would bring surgery would make the operation unjustifiable.

Dr. J. E. Hays: I was in Baltimore a few years ago and visited the different hospitals, in two of which I remember, Johns Hopkins Hospital and the University of Baltimore, I saw quite a number of cases. The main reliance in the University of Baltimore Hospital was hydrotherapy, and it was claimed that the mortality was only five per cent. Very few drugs were used in the Johns Hopkins Hospital, and much attention was paid to feeding the patients.

Dr. Pope : The latest statistics of Brand embrace 2,100 consecutive cases treated with four ounces of cold water every three hours. In no case were there bad symptoms.

Dr. Marvin : I have also noticed the difference in the character of the cases seen to-day as compared with the time I began practice. I have been led to believe that the old style of typhoid fever is more common in the country than in the city, and I have tried to explain this by saying that we were the survival of the fittest, rather than that the virulence of the typhoid germ has diminished.

Dr. Bailey : I recognize that nature has made a clot in the mouth of the bleeding vessel and that we should not dissolve it, but at the same time it may be advisable to take a little risk of doing this to prevent the man from dying. I would not be in favor of an agent that opens the capillaries, such as alcohol or nitroglycerine ; I would rather have digitaline or strychnine, particularly the first ; and I should give enough to keep the man from dying from the loss of blood that has already occurred. I think I have seen men die when there had been no hemorrhage for twenty-four hours.

I would say that typhoid fever is not what it was when I commenced practice. You will remember that nearly all cases were accompanied with wonderful tympanitis, diarrhea, and marked nervous disturbances. It is the exception to see such conditions now, the temperature may run for a week at 106° without any disturbance of the nervous system.

Dr. Cartledge : Do you not believe that this difference is due to the free preliminary purgation which is now the usual practice.

Dr. Bailey : I do not believe it can be accounted for in that way. I believe we often make mistakes in our great desire to keep up the forces of the body. The rule twenty or thirty years ago was to begin to feed the patient at once in a manner which to-day we would consider almost criminal.

I am rather in line with Dr. Marvin in his criticism in regard to prophylaxis. I do not believe we have any means of preventing a man from having typhoid fever if you have the germ. I, like him, do not believe in threatened typhoid fever. Typhoid fever occurs in the most robust men, and I would rather take a man whose nutrition is not so good, where he will not be endangered by imperfect elimination of waste products. I have never adopted the Woodbridge treatment. I am in the habit of trying to take care of the alimentary canal. I do this by not feeding too much. I wait until alcohol is needed. I feed

with a nutritious diet that can be easily digested, and rely upon salol for intestinal disinfection. In the third week there is nothing comparable to turpentine, which has the advantage of being a heart stimulant and diuretic. I am not in the habit of using turpentine from the beginning, as indicated by Dr. Wilson. JOHN L. HOWARD, M. D., *Secretary*.

Reviews and Bibliography.

A Text-Book on Nervous Diseases. By American authors. Edited by FRANCIS X. DERCUM, A. M., M. D., Ph. D., Clinical Professor of Nervous Diseases in the Jefferson Medical College of Philadelphia; President of the American Neurological Association. With three hundred and forty-one engravings and seven colored plates. 1056 pp. Philadelphia: Lea Brothers & Co. 1895.

Text-books of composite production seem to be of late contending for the field as boldly as corporations and trusts are seeking to control the field of business. For this plan there are in the book line certainly some advantages. Where, as at present is the case, requisition can be made on a large number of contributors, it requires greatly less time to produce an extensive work than when this must be done by a single author. It is only now and then that a man appears like Niemeyer or Gowers or Cazeaux, who has the scholarship, the classic style, the vast learning and the endurance to become acquainted with the necessary literature and possessed of the requisite experience to write a complete treatise. This difficulty increases daily, and the class of work produced by it must give way to co-operative work.

This text-book is one of the very best products of the co-operative method. The contributors being all men of deserved eminence in their line, and the editing of the most careful character.

The list of authors embraces the names of Drs. N. E. Brill, Charles W. Burr, Joseph Collins, Charles L. Dana, F. X. Dercum, E. D. Fisher, Landon Carter Gray, George W. Jacoby, W. W. Keen, Philip Coombs Knapp, James Hendric Lloyd, Charles R. Mills, S. Weir Mitchell, Charles A. Oliver, Wm. Osler, Frederick Peterson, Morton Prince, G. E. de Schweinitz, Wharton Sinkler, M. Allen Starr, and James C. Wilson.

The work is representative of the great medical schools of the country, and is illustrative of the best methods of instruction.

The editor has so arranged his material as to have general affections considered first, after which attention is progressively directed to those which are more and more special. Free use has been made of illustrations in black and colors, the figures being aptly chosen and well executed. The work is exhaustive as well as fresh and attractive, and can not but meet with a warm welcome with all who are interested in the study of neurology.

D. T. S.

An American Text-Book of Obstetrics, for Practitioners and Students. By JAMES C. CAMERON, M. D., EDWARD P. DAVIS, M. D., ROBERT L. DICKSON, M. D., CHARLES WARRINGTON EARLE, M. D., JAMES H. ETHERIDGE, M. D., HENRY J. GARRIGUES, M. D., BARTON COOKE HIRST, M. D., CHARLES JEWETT, M. D., HOWARD A. KELLY, M. D., RICHARD C. NORRIS, M. D., CHAUNCEY D. PALMER, M. D., THEOPHILIS PARVIN, M. D., GEO. A. PURSOL, M. D., EDWARD REYNOLDS, M. D., HENRY SCHWARTZ, M. D. RICHARD C. NORRIS, M. D., Editor. ROBERT L. DICKINSON, M. D., Art Editor. With nearly nine hundred colored and half-tone illustrations. 1009 pp. Price, cloth, \$7; sheep, \$8; half russia, \$9. Philadelphia: W. B. Saunders. 1895.

The reason offered for the existence of the American Text-Book of Obstetrics, by the editors, is the fact that it seemed practicable to produce a work which should not only embody the teachings of several prominent American obstetricians, thus reflecting all recent progress made in the theory and practice of obstetrics, but should also be a standard teaching work for students and a guide for practitioners.

The obstetric emergencies, the mechanics of normal and abnormal labor, and the various manipulations, are all described in great detail.

Efforts have been made by the employment of clear language and beautiful cuts to render attractive the sections on anatomy and embryology. To accomplish the latter at least a much harder task must be performed, no less than the make-over of the tastes and intellects of the vast majority of those in whom this interest is to be excited.

A marked feature of the illustrations is that they have been systematically planned so as to be most effective, having been drawn to a set scale and the same half as of the pelvis or the skull employed in different cuts. Comparison is in this way made a matter of little difficulty.

To enter into a detailed examination of the work would require greater space than we are permitted, nor is this necessary, for the work in every part is deserving of unstinted praise.

Two parts that on account of predilection, perhaps, strike us with especial force, are the articles on the mechanism of labor and the pathology of the puerperium by Professors Reynolds and Norris respectively.

In Professor Reynolds' article the style is so vivid that it requires no stretch of the imagination to see one's self at the bedside, realizing all the described acts as real experiences.

In the matter of the ever-interesting subject of the physics of rotation, Dr. Reynolds approves himself a clear and original thinker, and presents the arguments in favor of the dependence of rotation on the rifle effect of the inclined planes of the pelvis. But if we find ourselves yielding to his plausible reasoning we are compelled to halt when we come to explaining rotation from occipito-posterior positions. It is then we are driven to rely on the theory of the action of forces on the unequal arms of a lever of the third class, which if equal to rotation of the most difficult cases, can reason-

bear the blame for every case of mastitis, it is pleasant to observe the advanced ground Dr. Norris takes in its favor. How long will it be before massage of the breast is universally ordered as a routine practice? With it there must still be a case of mastitis now and then, but they need be but few indeed.

What with the clear type, what with the excellent matter and the wealth of illustration, whoever undertakes to surpass the American Text-Book of Obstetrics must indeed realize that he has a task before him. D. T. S.

The Pathology and Treatment of Venereal Diseases. By ROBERT W. TAYLOR, M. D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons (Columbia College), New York; Surgeon to Bellevue Hospital, etc. With two hundred and thirty illustrations and seven colored plates. 1002 pp. Philadelphia: Lea Brothers & Co. 1895.

For many years the possessor of "Bumstead and Taylor on Venereal Diseases" considered that he had for that subject a complete library. Now, after twenty-five years, Dr. R. W. Taylor, the survivor of these colleagues, appears with a volume on venereal diseases containing the mature thought, the honest convictions and ripe experience of one unsurpassed, in America at least, in capacity and opportunity in this particular line.

We have said honest, and that means much. What fads, what frauds, what ignorance might be revealed if all the sufferers could speak, or if, like Chaucer's duck thief, their "yerds could talk."

What has not been exploited as cure-alls for one season only to be thrown aside the next as being worthless, to have their places taken by something else destined to the same fate, the fee being the only constant.

Now it is divulse for stricture, now gradually dilate, now electrolyze, and now cut, with too often the only apparent aim of the physician, and the least harmful to the patient, being the passing of a fifty dollar bill. It would be a startling list indeed that would show the number of pockets that have been picked through the urethra. This of course is not applied to such as have made errors in searching for better treatment than what is known, for by experimentation alone do we advance. Syphilis in all its manifestations, now known to be so far-reaching, receives well-nigh exhaustive attention.

Altogether this is a most valuable and most welcome book in the world of medicine. D. T. S.

A Treatise on Nervous and Mental Diseases, for Students and Practitioners of Medicine. By LANDON CARTER GRAY, A. M., M. D., Professor of Nervous and Mental Diseases in the New York Polyclinic; Visiting Physician to St. Mary's Hospital; Neurologist to the Hospital for Ruptured and Crippled, etc. Second edition, revised and enlarged. With one hundred and seventy-two illustrations and three colored plates. Philadelphia: Lea Brothers & Co. 1895.

We are not inclined to throw bouquets, but the occasion on reviewing this volume presents itself so temptingly that too much can not be said in favor of this excellent work of Professor Gray's. The publishers, too, come

in for their share of praise, as the binding, typography, and cuts will testify. Every portion has been carefully revised, and five new chapters have been added, viz., those on Dementia, Dementia Paranoides, Confusional Insanity, Delirium, and Massage.

Being not yet convinced either that the application of hydrotherapy is practicable outside of a few large cities, or that it has more value than mere cleanliness, the author did not treat of this subject. With a view of not increasing the size of the volume beyond that best adapted to the student and physician, Professor Gray has omitted the bibliographical references contained in the first volumes. The book contains seven hundred and thirty-three pages of very concise and clearly written matter. J. L. H.

Pathology and Treatment of Diseases of the Skin, for Practitioners and Students.

By MORIZ KAPOSI, Professor of Dermatology and Syphilis and Chief of the Clinic and Division for Skin Diseases in the Vienna University. With eighty-four illustrations. Translation of the last German edition, under the supervision of JAMES C. JOHNSTON, M. D. 689 pp. New York: William Wood & Co. 1895.

At the head of the procession of names of those who have devoted their attention to skin diseases stands Ferdinand Hebra. Through his marvelous acumen order was brought out of confusion, and many vague and erroneous ideas that had long prevailed were dissipated by his iconoclastic method of instruction.

What Elisha was to Elijah Kaposi is to Hebra, his pupil and successor in the world's confidence. He was himself a collaborator in the completion of Hebra's epoch-making work, "*Lehrbuch der Hautkrankheiten*."

The lectures of Kaposi contain the views of Hebra modified as far as has become necessary by the advancement of modern science. The translation of the work has been carefully supervised by Dr. James C. Johnston, and is marked by smoothness and elegance of diction. D. T. S.

A Manual of Organic Materia Medica. Being a Guide to Materia Medica of the Vegetable and Animal Kingdoms, for the use of Students, Druggists, Pharmacists, and Physicians. By JOHN M. MAISCH, Ph. M., Phar. D., late Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. Sixth edition. Revised by HENRY C. C. MAISCH, Ph. G., Ph. D. With two hundred and eighty-five illustrations. 526 pp. Philadelphia: Lea Brothers & Co. 1895.

This is a revision of the well-known work of Dr. John M. Maisch, issued in 1892. The subsequent publication of the United States Pharmacopeia rendered necessary some alterations, and these have been made by his son, Dr. Henry C. C. Maisch.

Where necessary specific names have been changed to correspond to those officially recognized. Articles that have received official recognition appear in large type, while those that have been dropped appear in small type. The text throughout has received careful revision, and the results of recent investigations and observations have been incorporated. D. T. S.

Abstracts and Selections.

UTERINE TRACHELORRHAPHY.—In the November number of the new London monthly journal, entitled *Clinical Sketches Illustrative of Practical Medicine and Surgery*, we find in an article by Dr. Arthur E. Giles, of the Chelsea Hospital for Women, the following section, under the heading of *The Kind of Cervix that Requires Trachelorrhaphy*:

“While readily granting that in certain appropriate cases repair of a torn cervix may be followed by the disappearance of general nervous symptoms, I have so little confidence in the value of this or any other operation for the cure of nervous disorders as such, that I shall leave this aspect of the question altogether and confine my remarks to the indication for trachelorrhaphy afforded by definite local conditions.

“When a cervix is torn (as during labor) the raw edges become healed over by granulation and cicatrization, but, as a rule, without uniting. The resulting fissure does not necessarily give rise to symptoms, even if deep or bilateral. For the cervical mucous membrane may gradually acquire the characters of the vaginal epithelium; the external os retreats, as it were, toward the internal, while the anterior and posterior lips of the cervix become in reality lips or fappets, which can be readily separated to a greater or less extent. A cervix in this condition is not uncommonly discovered when a vaginal examination is made on account of other symptoms; and we may readily admit, as a general statement, that a laceration that has healed over does not, as such, require repair.

“If general neurotic symptoms are found to coexist with such a condition as I describe, an attempt to cure them by local treatment will be almost a certain failure.

“But the lesion may take a less favorable course. The exposed cervical mucous membrane may become unhealthy, either alone or as a part of a general endometritis; it then becomes congested, and, in consequence, the lips become separated. I believe that the tendency to separation is exaggerated by a marked coincident flexion of the uterus. The everted mucous membrane is then bathed in the unhealthy secretions (arising partly from the uterus) found in the vagina; and it is but a short step from this condition to that of erosion, with the formation of the retention cysts known as Nabothian follicles. The congestion and edema of the cervix commonly spread to the body of the uterus, which becomes heavy and enlarged, resembling the condition found in subinvolution. With the chronic endometritis and metritis so produced is frequently associated prolapse of the ovaries into Douglas' pouch, especially when there is also retroflexion. The ovaries share in the congestion and become unduly sensitive. The

usual symptoms complained of under these circumstances are abundant leucorrhœa, sacral aching, a feeling of weight and 'bearing down' in the pelvis, and dyspareunia.

"We have here in outline a picture of a case requiring the operation of trachelorrhaphy. Yet must this not be done at once; a little preparation is necessary. Firstly, the patient must be kept in bed ten days if circumstances allow, and meanwhile the congestion is relieved by the usual applications of tampons and douches. The uterus should be restored to its place when this is possible, and one or more applications may be made to the endometrium, according to the extent of the endometritis. In some cases these measures will suffice for relief, or even temporary cure, but there is a considerable likelihood of a return of symptoms. But in any case this stage should be arrived at before repair is attempted, otherwise there is a risk of non-union, and so of failure of the operation."—*New York Medical Journal*.

ANTIPYRINE AND TANNIC ACID AS A STYPTIC.—The following is from an article by Dr. Roswell Park, of Buffalo, which appeared in the *Medical News* for November 16th:

"In the *Medical News* of December 15 and 22, 1894, I rehearsed some of my experiences with antipyrine as a styptic in surgical practice, stating that I had for years used a five-per-cent solution as a spray, sterilizing the water before making the solution. This I had no hesitation in spraying upon any surface, peritoneal, cerebral, or other, from which parenchymatous oozing was taking place to an extent complicating the operation or jeopardizing the success of an ideal dressing. This therapeutic note attracted at least sufficient attention to lead to its pretty general use by surgeons in various parts of the country, from many of whom I have heard commendatory remarks, and from none of whom I have ever heard of disappointment in its use. The present note is to corroborate the favorable esteem in which I have long held this procedure, and to state that I have since resorted to it more widely and more generally for styptic purposes. Thus I have no hesitation in using it in the urethra, or even in the bladder, in cases of hematuria proceeding from either of these locations. Even in the eye it may be used without fear, preceding its use by that of a weak solution of cocaine, though in this location the antipyrine solution need not be made so strong. On the other hand, it may be used in much larger percentage when the five-per-cent solution fails to accomplish the purpose; even when small vessels spurt, compression for a few moments with iodoform gauze or acetanilide gauze sopped in this solution will often be effective.

precipitated an intensely agglutinative and cohesive substance, of to me unknown chemical composition, which offers the most ideal styptic for certain purposes that I ever dreamed of. This combination I hit upon by accident, and first resorted to in a case of apparently intractable hemorrhage from removal of adenoid tissue in the vault of the pharynx, in which I was called in consultation by my colleague, Dr. Hinkel. He happened to have at hand a bottle of alcoholic solution of tannin, while I was provided with antipyrine in powder. The case being emergent, I suggested the combination of the two styptics, and added the dry powder to the solution. To our surprise there was formed at once a gummy mass, at first flocculent, which quickly cohered, the result being a combination the stickiness and adhesiveness of which quite astonished us. A small sponge dipped into the fluid containing this material in suspension was inserted into the post-nasal space, and hemorrhage instantly was checked, not to again recur.

"I have since experimented with these materials, and have found that they may be united in almost any proportion with the formation of the gummy mass, and would suggest that the substances be mixed in proportion to the emergency of the case, and to the desire for little or much of the resulting compound. It is possible by adding strong solutions, or by pouring the powder of one into the solution of the other, to precipitate so much of the agglutinative composition as to make a gum that may be placed about the margin of the bleeding bone—for instance, in operations upon the cranium. Or a small piece of sponge or cotton sopped in this material may be forced into a tooth socket, or in various other ways its use may be made to result in benefit and satisfaction. There is but one attendant difficulty, that it is so remarkably cohesive that when the time comes for detachment or separation of the tampon it is difficult to remove it. It may be even necessary to wait for sufficient time for the formation of granulations and separation by natural processes.

"I strongly commend to surgeons experimentations with these solutions, and their own determination as to the strength in which it may be best to use them."

PRIMARY PULMONARY ACTINOMYCOSIS.—Aschoff, of A. Fraenkel's clinic (*Berl. klin. Woch.*, 1895, Nos. 34 to 36), first refers to the three stages described by Israel as follows: (1) Limitation of the disease to the lungs; (2) extension by contiguity or metastasis; and (3) rupture upon the surface. The recognition of the disease in the first stage from tuberculosis may be very difficult. Actinomycosis spares the apices, and there is no marked hemoptysis, although the sputum may be blood-stained. The presence of the fungus in the sputum is the most important fact. In the second stage a partial shrinking of the lung occurs, with exudative pleurisy. When the chest wall begins to soften an empyema may be simulated. More recently some of these points advanced by Israel have been controverted. Actinomycosis has been known to affect the apex of the lung, and the shrinking

was not so constant as was thought. It has been maintained that not supuration but tumor formation is the characteristic of this mycosis. The fungus may not be found in the sputum or even in the pus. It has been maintained that not only the teeth and tonsils may be the original source of the lung infection, but that the fungus may be directly inhaled. In the case reported by the author there was on admission a right-sided pleural effusion, with flattening of the upper part of the chest. A systolic murmur was heard over the base of the heart. Later there was a moderate hemoptysis lasting four days. Clear fluid was drawn off by the exploring needle. No tubercle bacilli, tumor elements, elastic fibrils, or fungi were found in the sputum, though repeatedly looked for. Later a local bulging below the right breast was noted, and eventually pus containing the actinomyces was obtained from this. A day or two later about 150 c.cm. of pus containing the fungus was spat up. An incision was made into the chest at the site of the bulging, and stinking pus containing the actinomyces was let out. Peritoneal symptoms eventually appeared and the patient died. The author draws attention to the following points in the case: (1) The infection was derived from a carious tooth; (2) the disease lasted over two years; (3) the diagnosis lay between tuberculosis, echinococcus, and possibly malignant tumor; (4) the pus has a characteristic smell, and may in all probability be caused by the actinomyces alone; (5) the sputum is often flesh-colored or like blackberry jelly, and may simulate that of tumor of the lung; an appreciable glandular swelling was not present; (7) the extension occurred by contiguity; and (8) the urine showed the diazo reaction. He adds that in an early stage it might be possible after resection of ribs to scrape away the disease.—*British Medical Journal*.

THE DANGERS OF POTASSIUM IODIDE IN THE TREATMENT OF GOITRE. At a recent meeting of the *Société de Thérapeutique*, a report of which appears in the *Progrès Médical* for November 23d, M. Ferrand related the following case, which had come under M. Couchon's observation:

"A man, thirty-five years old, suffering with an enormous goitre, had been taken with congestive symptoms. A physician had prescribed an iodized ointment and sixty grains of potassium iodide a day. The patient continued the treatment for three weeks, at the end of which time the goitre had diminished in size, but coryza, dyspnea, diarrhea, trembling, and cachexia had supervened, and the patient had died at the end of a month with symptoms of cardio-pulmonary paralysis. M. Couchon thought that these symptoms might have been due to atrophy of the thyroid body."

M. Ferrand remarked that Lebert thought goitres were particularly susceptible to treatment with potassium iodide; Reuser had also observed the same thing. M. Jasiewicz said that occasionally very small doses had caused symptoms of iodism. M. Paul said that iodide poisoning was more frequently caused by personal susceptibility than by the size of the dose. M. Ferrand thought that the difficulty of elimination should be

taken into consideration. In the case in question, he said, the poisoning had given rise to troubles of nutrition much more profound than could be attributed to the cachexia strumipriva. M. Paul remarked that in cases of poisoning from potassium iodide iodism should not be exclusively considered. The different iodides did not act wholly through the iodine, as the different action of each of the following drugs demonstrated, potassium iodide, sodium iodide, iron iodide, and the tincture of iodine.—*New York Medical Journal*.

TREATMENT OF ADDISON'S DISEASE.—The treatment of Addison's disease by causing the patient to eat the adrenal bodies of a sheep has been suggested by more than one observer, and some successful cases have been reported. Another case is published by Dr. C. G. Stockton in the *Medical News of Philadelphia*, of November 16th. The case was that of a married woman, aged forty. It was said that her mother suffered from some affection resembling that for which the daughter now sought relief. The history of her illness was that for three years she had complained of the symptoms of Addison's disease, weakness, vomiting, loss of flesh, great muscular debility, and intense bronzing of the skin, which over the regions naturally pigmented presented the color of dark mahogany. There was also unnatural pigmentation of the mucous membrane of the lips, cheeks, and pharynx. The gastric contents on examination showed an absence of odor and mucus; the acidity was very faint, hydrochloric acid was absent, and lactic acid appeared as a mere trace. There was some diarrhea. Both kidneys were movable. Above the left kidney, closely connected with it, moving with the kidney, yet movable while the kidney was held still, was an irregularly shaped body, about the size of a hen's egg, which was slightly tender upon pressure. It was presumed to be a diseased adrenal. The pulse was somewhat slow and feeble, and at times very infrequent. Examination of the blood showed 1,800,000 red corpuscles to the cubic millimeter. The hemoglobin was thirty per cent. There was marked leucocytosis, and also poikilocytosis. The patient had for some months been taking iron and arsenic. These remedies were continued, and in addition she was advised to inhale five gallons of oxygen gas three times daily, and to eat daily two uncooked adrenals from a sheep. The treatment was commenced on June 23d, and on July 6th the patient returned and showed great improvement in color and general appearance. Her spirits had returned with her appetite. She was hungry for the first time in five years, she said. There was a diminution of the pigmentation, as well as a decided increase in strength; the red blood cells had risen to 3,000,000 to the cubic millimeter; the abnormal forms had much decreased in number. The improvement steadily progressed, and on September 14th there were 4,000,000 red blood cells to the cubic millimeter and sixty per cent of hemoglobin. On September 27th the contents of the stomach were again examined, but no change for the better could be discovered in her diges-

tion, although she had gained six pounds in weight. The pigmentation had almost disappeared from the hands, face, and breasts. The areolæ of the nipples were no darker than is common with women who have borne children. The most striking improvement was seen in the pulse, which was large, strong, and frequent. The blood pressure was considerably above that of health, but it did not show that high tension mentioned by Prof. Schäfer and Dr. Oliver. The glands were prepared as a sandwich, and three were occasionally taken without causing discomfort to the patient. On October 1st she was in better health than she had been for five years, and all medication had been withdrawn, save hydrochloric acid and pepsin. Dr. Stockton remarks that an adrenal that is palpable in a woman forty years of age is very suggestive of malignancy; but the results of the examinations of the blood afford the hope that the adrenal disease is not carcinomatous in nature.

DIGITAL EXPLORATION IN MIDWIFERY.—Crouzat (*Rev. Obstét. Internat.*, October 21, 1895,) does not agree with certain German obstetricians who would discard digital exploration in normal labor, relying on abdominal palpation. The diagnosis of normality may demand the introduction of the finger into the vagina. Crouzat's principles simplify digital exploration and guard against its dangers. Vaginal examination, he thinks, should be made as seldom as possible. One exploration at the beginning of labor and another immediately after the rupture of the membranes are usually sufficient. His practice is to make the external parts antiseptic; then the hands and forearms are washed and brushed thoroughly. The nails must be specially attended to. The washing is afterward repeated in a 1 in 1,000 solution of sublimate. Great care in the introduction of the forefinger is strongly advocated. It should be dipped in sublimated vaseline and guarded by the thumb and the other fingers while the hand is passed under the clothes and near the patient's thighs. On reaching the perineum the labia are parted by the thumb and middle finger. The forefinger is lastly introduced into the vagina without having touched any part of the patient or her clothes since the instant it was made aseptic.—*British Medical Journal*.

HOW TO STUDY ANATOMY.—(*Journal de Medicine, de Paris*.) In the opening lecture of his course in anatomy, Prof. Farabeuf gave his pupils some advice as to how to study the subject. His opinion is that it is not from books, nor by ear, that the student must learn to know the human

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÆ."

Vol. 21.

SATURDAY, JANUARY 11, 1896.

No. 1.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.
JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3
per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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THE ROUT OF QUACKERY IN KENTUCKY.

Our readers are familiar with the history of our present law regulating the practice of medicine in Kentucky, and the yeoman's task which our State Board of Health, through its able secretary, Dr. J. N. McCormack, undertook and successfully performed. In the framing of the law Dr. McCormack built upon the best models found in the statutes of other States which had such laws, and supplementing these with such additions as suggested themselves to his judicial mind, he has presented us with a law that is little short of perfection.

If any physician, politician, or philanthropist doubts this, he has but to compare the state of affairs medical, in Louisville, for instance, with that of ten years ago. Then the placards, signs, and show bills of the quack stared him in the face in every place and at all points of the compass, and the evidences of their money-getting under false pretenses made him blush for his kind. To-day "the places that knew them know them no more," except in the cases of two or three quacks whose long residence in the State enabled them to technically evade the law. And these no longer flaunt their advertisements before the public gaze, but carry on an underhanded sort of business behind the unadorned doctor's sign, or secretly, without visible indication of their place or name.

The result is most salutary. Those who practice medicine honestly are not handicapped by the methods of advertising practiced by these pretenders, the cause of truth is promoted, and the poor are no longer robbed in the name of science.

That these benefits are not limited to the metropolis and larger cities of the State, the following letter to the secretary of the Board, by Dr. George Beeler, of Clinton, gives abundant proof:

CLINTON, KY., December 27, 1895.

Dr. J. N. McCormack, Bowling Green, Ky.:

DEAR DOCTOR: The so-called doctors claiming to represent cure-all concerns in Indianapolis, Chicago, and Cincinnati, will be closely watched. That you may be informed, in part at least, how energetic our County Attorney, backed by the County Board of Health, has been in protecting the citizens of Hickman County against pretenders and quacks, I only need say that since the law regulating the practice of medicine, a number have been tried and fined for violating it. You had some correspondence with our County Attorney, Mr. Joseph Bennett, relative to a party practicing medicine in Columbus, Kentucky—I can not now recall the name—but he was fined fifty dollars, and for fear of being prosecuted for false swearing he left the county.

Dr. A., whom you have seen, was prosecuted in this county, at Clinton, for violating the law regulating the practice of medicine, three times, and was defended by two of the ablest lawyers of Mayfield. The jury failed to find a verdict against him, but for fear of being tried for violating the law in two other cases (there being in all five indictments against him in this county) he gave up trying to do any practice in this county, and confined his labors to the county of Graves principally. If he has ever been here since being tried for violating the law, I have not heard of it.

Some time before the trial of A., a Doctor P., who had a bogus diploma, was tried and fined fifty dollars and left the county. Some time during the month of July, 1895, one of those Indianapolis doctors you would warn us against, located at Oakton, a station on the M. & O. R. R., four and a half miles from Clinton, and was creating for a short time quite a sensation in that locality. He was arrested and brought here to Clinton and tried for practicing medicine without a license. He was fined, and not having sufficient money to pay his fines, remained in the county jail sixty days, and was taken out and tried for false swearing and sent to the penitentiary for one year.

your patience in enduring abuse and misrepresentation. I can not see how the State Board of Health could get along without you. If every one of the old members are left out you should be retained on the board. I do not know any one who could fill your place, who would take the same interest in the work that you do.

GEORGE BEELER.

This letter is but further evidence of the strength and efficiency of the law. It may not have force enough to rout all the old offenders, but it presents a barrier absolutely impregnable to the onslaughts of would-be new invaders, while it holds to the line all weak-kneed members of the guild who under ordinary conditions might wander in "by and forbidden paths."

The last paragraph of Dr. Beeler's letter will, we trust, be carefully considered by every high-minded physician in the State. The recent change in the administration ought not to make any radical change in a body so distinctly humanitarian in its interests and purposes, and so clearly non-partisan, as must be an efficient Board of Health, and we believe that the powers that be will so view the question.

The members of the Board are without exception earnest, honest, and zealous workers for the public good, while several of them are acknowledged to be eminent sanitarians. To remove any of these gentlemen and put in their places men without experience, however worthy, would weaken the Board if it did not defeat its purpose. But whatever might be the effect of other changes it is certain that the removal of the distinguished secretary would be a calamity. A calamity, however, which our faith in the influence of the profession of the State and in the wisdom of our executive leads us to believe is not imminent.

Notes and Queries.

THE PROLIFIC QUALITIES OF THE FRENCH RACE.—In the *Journal des Sciences Médicales de Lille* for November 9th there is an article on this subject by M. G. Eustache. This subject, he says, is an important one, since upon it depends the future of France, and also that of the medical profession. It is the fashion to speak of the depopulation of France, or, says the author, to be more exact, the feeble coefficient in the increase of its population. Economists, moralists, hygienists, and physicians have rivaled each other in seeking the cause. Long discussions on this subject have been held by political bodies as well as by learned societies, and many interesting truths have been uttered, but also certain statements which are far from being exact, against which it is of the highest importance to make a bold protest.

Among these erroneous statements, says the author, the principal one is that the French woman has only slight prolific qualities, or none at all; that these qualities are constantly diminishing, and threaten to become extinguished; that she has lost this remarkable attribute of her ancestors, and has left it to her Canadian sisters, who, although of the same origin and of the same blood, preserve remarkable prolific qualities. It is this idea, says the author, which is far too widespread in France and also abroad, that should be combated, and it is important to show by recent convincing examples that in France the people, the middle classes, the rich, and the poor, are prolific, that the families increase when they wish it.

The author states that he could cite many instances of the prolific qualities of the French in the interior part of the country and in the North. He recounts an instance which came under his observation in his practice, which shows the remarkable prolific qualities of the French women. The patient in question had been pregnant twenty-four times; her oldest sister had also been pregnant twenty-four times, and the youngest sister twenty-two times. Fifty-three children had been born at full term, twenty-one of whom had lived. Unfortunately, says M. Eustache, scarcely half of this number have a chance of reaching maturity, owing to privations and to a deplorable want of a proper hygienic system, and the number of children will be reduced to four for each family, which is about the general average in French households.

Whatever the cause may be, says the author, we may conclude from this example, and a thousand others of like nature, that the working people of France multiply rapidly, and that, if the hygienic and social conditions under which they live were not so wretched, France would profit largely by this remarkable fecundity.

M. Eustache relates two instances, this time taken from the middle classes. In 1793 H. D., a native of Valenciennes, married, and ten children were born to him; in 1812 he married again, and by this second marriage there were eleven children. Nine of the children died, of the remaining eleven eight married, and in the year 1891 their descendants numbered over four hundred. The second instance was that of a native of Roubaix who married in 1843. By this marriage there were thirteen children, ten of whom reached maturity and married, and in 1893 their descendants also numbered over four hundred. These two examples show that the French middle classes are as prolific as the working classes. They show, furthermore, that, owing to better hygienic conditions, the results of this fecundity are constant and progressive.

M. Eustache states that he could multiply the number of examples, but the three mentioned are sufficient to prove that the prolific qualities of the French population are not at all impaired.

The subject is, says the author, first of all, a question for the physician, and then for the moralist. The physician, by hygienic prescriptions and proper dietetics, by his care and by the particular methods which he is constantly putting into practice, may do much for the preservation of the lives of children. It is owing to his information and to his urgent entreaties that a public service of indisputable usefulness has been created. In the accomplishment of his national duties the physician has not failed, and the results that he has obtained are very valuable.

But with regard to the moralist, says M. Eustache, he has a task, if not more difficult, at least more arduous, and if his influence on the progress of the French population is yet undecided and not perceptible, the influence of the physician is evident and incontestable.—*New York Medical Journal.*

THE VALUE OF GASTRO-DIAPHANY.—Meinert (*Centralbl. f. inn. Med.*, November 2, 1895,) first refers to Martin and Meltzing's investigations into this subject. Kelling has examined eleven cases in the author's clinic by the diaphanoscope and also volumetrically by inflation with air after the author had determined the condition of the stomach by the usual CO₂ method. In one case the lower boundary of the stomach was found by the author to have been raised after the distension to three fingers' breadths above the umbilicus. Kelling obtained a similar result a few days later by the volumetric method. A few days afterward three fourths of a liter of water was put into the stomach and the gastro-diaphanoscope used. The limits of the figures obtained were marked out on the abdominal wall. In varying positions of the lamp different pictures were obtained. In cases of gastroptosis a correct representation may be got of the lower margin of the stomach, but no information can be obtained in regard to the upper margin. The diaphanoscope can only occasionally be of use. It may facilitate the detection of tumors in the neighborhood of the spleen, also the topographical determination of palpable tumors of the stomach and

parts in the neighborhood. Any attempt to determine the position, size, or shape of the stomach by this means is not only unsuccessful, but may mislead.—*British Medical Journal*.

To the Editors of the American Practitioner and News:

I most respectfully call your attention to a recent ordinance "To Prevent the Spreading of Infectious and Contagious Diseases," which I am preparing now to enforce. After much study and experience as Health Officer of the city of Louisville, I prepared this law, which I believe, properly enforced, would save many lives and do great good. However, the most progressive field of our profession is the practice of arresting the diffusion of disease by limiting the spread of contagion. In the grand system of preventive treatment we have rational grounds for the belief, if the spread of infection were restricted by law, that contagious diseases would practically be extinguished. I also inclose you my report for the year 1895. You will notice that 500 persons died of pneumonia during the year. In 1893, 248 died of pneumonia. In 1894, 253 died of pneumonia. This great increase of mortality from pneumonia, I think, was caused from a complication of that disease with the grippe; the same cause existed all over this country, and the mortality of other cities showed about the same ratio of increase.

W. P. WHITE, M. D., *Health Officer*.

AN ORDINANCE TO PREVENT THE SPREADING OF INFECTIOUS AND CONTAGIOUS DISEASES.—Be it ordained by the General Council of the city of Louisville: That every physician located or practicing in the city of Louisville, who shall know that any person whom he or she is called upon to visit, or, who comes, or is brought to him or her for examination, suffering from or is afflicted with diphtheria, diphtheritic croup, scarlet fever, smallpox, or varioloid, shall forthwith report the same to the Health Department, in writing, over his or her signature; state the name of the disease and the name, age, and sex of the person suffering therefrom, and shall set forth by street and number or otherwise sufficiently designate the house or room in which said person may be located.

Sec. 2. Upon receipt by the health authorities of a report of the existence of a case of diphtheria, diphtheritic croup, scarlet fever, smallpox, or varioloid, the Health Officer shall at once place, or cause to be placed, in a conspicuous manner upon or near the house or premises in which said case may be located, a placard or placards, upon which shall be printed in large letters the words, "diphtheria here," "scarlet fever here," and the display of a yellow flag for smallpox or varioloid, as may be the case; and said placard or placards or flag shall remain thereon until such time as the rules and regulations established by the proper health authorities regarding the destruction or disinfection of infected bedding, clothing, etc., shall have been carried out and fully complied with.

Sec. 3. The head of a family occupying any house or premises upon or near which such placard or placards or flags aforesaid may be placed, or any other person whatsoever, shall be liable for a fine or penalty, provided by this act, in case where such placard or placards or flags are removed, defaced, covered up, taken down, or destroyed, with his or her knowledge, act, or consent, before the time provided by section two (2) of this act.

Sec. 4. It shall be the duty of the undertaker, or other person or persons, having the body of any one dying of above-named diseases in charge, to thoroughly disinfect and place every such body within the coffin or casket in which it is to be buried within six (6) hours after first being called upon to take charge of the same; provided such call is made between the hours of 5 A. M. and 11 P. M., otherwise such body shall be so placed in such coffin or casket within twelve (12) hours; the coffin or casket then to be closed tightly and not again opened unless permission be granted by the Health Officer for special cause shown.

Sec. 5. The body of a person who has died of either of these diseases hereinbefore mentioned shall not remain unburied for a longer period of time than thirty-six (36) hours after death, unless special permission be granted by the Health Officer extending the time which such body may remain unburied for special cause shown. The head of the family, or the person or persons having charge of the funeral of such body, shall be responsible for any violation of the provisions of this section. Each day the said body shall remain unburied after the said thirty-six hours shall be a separate offense.

Sec. 6. All services held in connection with the funeral of the body of a person who has died of either of these diseases hereinbefore mentioned must be private, and the attendance thereat shall include only the immediate adult relatives of the deceased and the necessary number of adult pall-bearers; the head of the family or other person or persons having charge of said funeral services shall be responsible for any violation of the provisions of this section.

Sec. 7. The body of a person who has died of either of these diseases hereinbefore mentioned shall in no instance be taken into any church, chapel, public hall, or building for funeral services. The head of the family, or person or persons having charge of said funeral services, and the sexton, janitor, or other person or persons having control of such church, chapel, public hall, or building, shall be responsible for any violation of the provisions of this section.

Sec. 8. No child or other person belonging to or residing with the family of any person, or residing in the same house in which any person may be located who is suffering from diphtheria, diphtheritic croup, scarlet fever, smallpox, or varioloid, shall be permitted to attend any public, private, parochial, or other school; and all school principals or other persons in charge of said schools are hereby required to exclude any and all such children and persons from said schools; said exclusion to continue for a period of twenty (20) days following the recovery or death of the person last afflicted in said house or family; and all such children or other persons as aforesaid, before being permitted to attend or return to school, shall furnish to said principal or other person in charge of said school a certificate, signed by said medical attendant of said children or persons, or by a physician to be designated by the health authorities, setting forth that the twenty (20) days mentioned in this section have fully expired.

Sec. 9. Any physician, undertaker, principal, head of family, or other person or persons, as aforesaid, who shall fail, neglect, or refuse to comply with, or who shall violate any of the provisions or requirements of this act, or of the rules and regulations of the aforesaid health authorities, under and by virtue of the provisions of this act, shall, for every offense, upon conviction thereof before the City Court, be fined not less than ten nor more than one hundred dollars for each offense. Each day he fails, refuses, or neglects the same to be a separate offense.

Sec. 10. When smallpox or varioloid is found to exist, the Health Officer is hereby empowered to send the person or persons so afflicted to the Eruptive Hospital or to such other place as may hereafter be provided for the reception of such persons. And in case any person so afflicted shall refuse to leave his house, it shall be the duty of the occupant of such house to warn the public of the existence of such disease by

the display of a yellow flag from such portion of the premises as may be designated by the Health Officer, such flag to be furnished by the Health Department.

Sec. 11. That every person being the guardian or having the care, custody, or control of any minor or other individual (excepting such as have had smallpox or varioloid), shall cause and procure such minor or individual to be so promptly and effectively vaccinated that such minor or individual shall not take, or be liable to take, the smallpox.

Sec. 12. No principal of any school, and no principal or teacher of any private, sectarian, parochial, or other school shall admit to any school any child or minor who shall not have been properly vaccinated. The evidence of such vaccination shall be a certificate signed by the Health Officer or any practicing physician.

Sec. 13. The Health Officer is hereby empowered to visit any and all public, private, and parochial schools in the city, and to make or cause to be made an examination of the children and minors in attendance therein as often as he may deem necessary to secure compliance with the provisions of this ordinance.

Sec. 14. Any person violating the laws of vaccination shall be liable to a fine in the City Court of not less than ten nor more than twenty dollars, and shall also be liable to like fine for every ten (10) days thereafter they shall delay having the operation of vaccination performed.

Sec. 15. The physicians of the Eastern and Western districts shall render medical treatment to the indigent residents, and shall vaccinate all residents of said city who shall desire it, free of charge, and make monthly reports to the Health Officer.

Sec. 16. This act shall take effect from and after publication.

H. M. BLATZ, P. B. C.

GEO. W. CHECK, C. B. C.

R. E. KING, P. B. A.

R. T. JACOB, JR., C. B. A.

Approved December 24, 1895.

HENRY S. TYLER, Mayor.

REPORT OF W. P. WHITE, HEALTH OFFICER OF THE CITY OF LOUISVILLE, FROM
JANUARY 1 TO DECEMBER 31, 1895.

Elevation above sea level,	525 ft.
Estimated population,	205,000
Total number of deaths,	3,493
White, number of deaths,	2,568
Colored, number of deaths,	925
Annual death-rate per 1,000 inhabitants,	17
White, 168,547 population; death-rate,	15
Colored, 36,453 population; death-rate,	25
Consumption,	394
Pneumonia,	500
Typhoid fever,	158
Notices served to abate nuisances,	2,311
Vaults cleaned,	835
Sewer connections made,	681
Warrants issued,	97
Diseased cattle killed,	479
Diseased cattle condemned and sent out of the city,	851
Milk samples tested,	152
Vaccinated,	6,683

patients acquire a habit, many of the hypnotics in common use are positively contra-indicated. This applies with especial force to opium and its preparations, for not a few hysterical subjects have become morphine habitues who took this insidious drug at first for no other purpose than to banish sleepless nights. Chloral is also an objectionable hypnotic in the majority of these cases, while the bromides are often inefficient. Some years ago it would have been difficult to suggest an ideal soporific for these cases, one which would produce normal, refreshing sleep, rapidly, safely, and pleasantly. Now that difficulty has been practically solved by the introduction of trional. The numerous reports that have thus far appeared on this remedy coincide in assigning to it the position of an extremely efficient hypnotic. A prompt and reliable effect can always be anticipated in cases of hysterical insomnia from doses of 1.0 to 1.5 gram, provided the sleeplessness be not due to pains. Any possible after-effects can be prevented with certainty during its continued use for some time, if trional be always administered in a large quantity of warm fluid, and in the day following its administration increased diuresis be secured by one or two bottles of some carbonated mineral water (seltzer, apollinaris), as well as regular movements of the bowels. If these precautions be considered trional can be regarded as a perfectly safe hypnotic. This is distinctly shown by the fact that in many psychiatric clinics the remedy has been employed for more than three years without any noteworthy after-effect. In the sleeplessness of hysterical persons which is usually due to cerebral excitement trional will prove an admirable sedative and soporific which may be given for long periods without danger of habituation or any deleterious influence upon the general health.

THE JOURNAL OF EXPERIMENTAL MEDICINE.—In January, 1896, will appear the first number of *The Journal of Experimental Medicine*, a periodical devoted to original investigations in Physiology, Pathology, Bacteriology, Pharmacology, Physiological Chemistry, Hygiene, and Medicine.

That the journal will be of high character and truly representative of scientific medicine in this country is assured by the character of those whose co-operation has been secured. It is believed that the interest in scientific medicine in this country and the desire both here and abroad to find readily accessible the publications of American contributors to the medical sciences will secure a large list of subscribers for the support of the journal.

Dr. William H. Welch, Professor of Pathology in the Johns Hopkins University, is to be the editor of the new journal, and with him will co-operate a board of twelve associate editors.

THE COLLEGE AND CLINICAL RECORD will be hereafter known under

Special Notices.

ARTISTIC.—Our readers will notice the artistic advertisement in this issue of "Dioivburnia," the most powerful uterine tonic attainable, anti-spasmodic and anodyne, which has simplified the practice of gynecology. A reliable and trustworthy remedy for the relief of Dysmenorrhea, Amenorrhea, Menorrhea, Leucorrhea, Subinvolution, Threatened Abortion, Vomiting in Pregnancy and Chlorosis; directing its action to the uterine system as a general tonic and anti-spasmodic. It is unexcelled.

This product being manufactured by the well-known Dios Chemical Company of St. Louis is sufficient guarantee of its reliability.

PROFESSIONAL OPINIONS OF INGLUVIN.—Edward Warren (Bey), M. D., C. M.: "Hereafter I shall prescribe 'Ingluvin' liberally and with great confidence in its therapeutic value."

Chas. Low, M. R. C. S. E., etc.: "Medical men will never regret using 'Ingluvin.'" Edward Cotten, D. N., C. P. P., London: "'Ingluvin' is particularly efficacious in vomiting produced by pregnancy."

Waldo Briggs, M. D.: "I have used 'Ingluvin' extensively and find it far superior to any remedies for vomiting of pregnancy, dyspepsia, and indigestion."

BATTLE & Co., ST. LOUIS: Some time ago you sent me specimens of your preparations of Bromidia, Papine, and Iodia. Unlike many who send out specimens you sent an amount large enough to really make a trial with. I had used the two first named a little, but having them more forcibly brought to mind, and recognizing the fact that I had them on trial, I watched their action more carefully. I can say that they are both elegant and health bearing. Bromidia I used on a man verging on mania a potu, Papine on a nervous typhoid woman, and Iodia on a young man who had carried boils for three years as the result of ivy poisoning. The preparations were a decided success in every instance.

Yours truly, E. C. ADAMS, M. D.

Watertown, S. D., Dec. 10, 1895.

GONORRHEA, GLEET, AND LEUCORRHEA.—Kennedy's White Pinus Canadensis gives perfect satisfaction in gonorrhea and gleet; have used it in cases within the last six months that resisted all other remedies. Have also used it successfully in cases of leucorrhea and ulceration of the os uteri. I am highly pleased with its effects, and certainly recommend it to the profession. The white is preferable—leaving no stain on the clothing.

J. R. WILCOX, M. D., Colorado Springs, Colo.

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THE AMERICAN PRACTITIONER AND NEWS

"*NEC TENUI PENNÂ.*"

VOL. XXI.

LOUISVILLE, KY., JANUARY 25, 1896.

No. 2.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—*RUSKIN.*

Original Articles.

NEURASTHENIA.*

BY JOHN FORD BARBOUR, M. D.

I propose to consider the relation between the condition termed neurasthenia and diseases of the genital tract in the male and female in the four following propositions:

1. In patients of the neuropathic predisposition genital lesions may act as an exciting cause of nervous affections. The removal of the former does not by any means invariably bring about the disappearance of the latter; on the same principle that the removal of a spiculum of bone does not always cure the epileptic fits of which it was the original cause.

2. The genital lesion may be one of a number of causes. This is most frequently the case, as was demonstrated by Engelhard at the Freiburg clinic.

3. The genital lesion and the nervous affection may be merely coincident, or both results of the same cause.

4. The genital lesion may be the result of the nervous affection.

From the gynecologist the neurasthenic usually goes to the oculist, to whom she is often a source of considerable annoyance and perplexity. Beard was the first to call attention to the condition which he and Dr. Roosa called the "neurasthenic asthenopia." When knitting, embroidery, or any near work is attempted, after a time the object

* Read before the Louisville Medico-Chirurgical Society, November 31, 1895.

becomes indistinct. In reading and writing the figures swim before the eyes and finally vanish. If the patient persists in using the eyes pains radiate from the eyeball and spread over the head, the eyes fill with tears, a sense of extreme discomfort is experienced, and the effort must be relinquished. In some cases even amblyopia and amaurosis are developed. These symptoms may or may not be accompanied by errors of refraction. When they are so accompanied the effort to measure and correct these errors is apt to prove one of the most trying and disagreeable tasks that the oculist is called on to undertake. The eye tires so rapidly that it is impossible to arrive at a satisfactory conclusion. As the trouble is generally at the other end of the optic nerve the labors of the oculist do not usually meet with any great success.

The surgeon, accustomed to deal entirely with objective symptoms, generally classes neurasthenia under the head of imaginary ailments which do not demand any serious treatment and are food for the quacks. If the patient be a man, and if he has had the gonorrhea—not an uncommon coincidence—the surgeon will pass a sound on him and almost invariably find a sensitive posterior urethra. Then will follow a course of treatment by sounds, deep injections, etc., all without benefit. The surgeon will tell him that he is hipped, and let him go. Sensitiveness of the posterior urethra, spermatorrhea, and psychical impotence are among the commonest symptoms of neurasthenia.

On the other hand, the neurologist, by paying too close attention to the subjective symptoms, will often make ludicrous blunders and overlook some trifling matter, such as an ovarian tumor, or a contracted kidney.

The general practitioner generally diagnoses these cases as anemia or chronic biliousness, or chlorosis, or dyspepsia, or oxaluria, or spinal irritation, or suppressed gout, or a hundred other things according to his personal predilections or the prominence of the various symptoms.

And when he does diagnose the case correctly, the remedies he employs are either inefficient, as a rule, or positively harmful. He still retains a touching and beautiful faith in nerve tonics and nerve foods. There is no such thing as a nerve tonic or a nerve food—they are all frauds. And what a wonderful panacea for nervous diseases he must consider bromide of potassium to be! I could ask for nothing better than a monopoly of the bromides. The truth is that the abuse of the bromides does untold harm. They are powerful devitalizing agents, and the only possible excuse for their prolonged administration is the

existence of epilepsy. Even then, when one looks at the pale, puffy, pimply face of a patient fully under their influence, he is inclined to question whether they do most good or harm.

In order to treat a disease intelligently we must first understand its pathology. I shall run over very briefly some of the numerous hypotheses that have been advanced to account for neurasthenia. For one who is metaphysically inclined neurology offers opportunities second only to theology. I shall not inflict upon you any of the vast, vague, cloudy theories which our German brethren have evolved out of their inner consciousnesses, but shall only discuss those which seem founded on fact.

Beard claimed that it was due to an impoverishment of nerve force, a lack of equilibrium between the use and the repair of the nervous elements. Erb attributed it to an intimate disturbance of the nutrition of the nervous system, which was certainly a very safe hypothesis. Kowalewsky bases his theory upon two orders of facts. In the first place it has been shown by Anfinew and Sadowsky, and also by Hodge, by experiments upon animals, that prolonged irritation of the peripheral nerve fibers produce certain changes in the protoplasm of the central cells, such as coagulation, necrosis, vacuolation, and so on. In the second place, overuse of the nervous system results in the accumulation of excrementitious products and a sort of auto-intoxication of the nervous system is produced.

The experiments of Masse, of Turin, and of Michael Foster, the physiologist, have shown that the sense of fatigue is due to poisoning of the cerebrum by the products of retrograde metamorphosis. "The blood of a tired animal is poisoned, and when injected into another animal causes the phenomena of fatigue." The toxicity of the blood may become so great as to prove fatal, as was shown by Foster, in rabbits that had been hunted to death.

Among the French the principal theory which has prevailed is that which attributes neurasthenia to lithemia. They use this term in a broader sense than we do. Huchard states that in most cases neurasthenia is an arthritic neurosis. Vigoureux, in a monograph upon this subject, claims also that all neurasthenics are arthritics, basing this upon the analysis of the urine in one hundred and fifty cases. The urine was invariably found to be highly acid. Bouchard believes that it is due to a gastro-intestinal auto-intoxication. In these cases the amount of gastric and intestinal juices is diminished, the motility is

impaired, consequently there is fermentation of the ingested food and the formation of substances resembling ptomaines which are absorbed and poison the central nervous system.

In the last place, neurasthenia is sometimes a sequela of an acute infectious disease, such as influenza or typhoid fever.

From a consideration of these facts I think we can come to some very definite conclusions concerning this disease. In the first place, then, neurasthenia is due to a toxemia. In the second place, this toxemia is not due to one but to a variety of poisons. These are sometimes bacterial in origin, as in cases following influenza and gastrointestinal fermentations; sometimes the poison is uric acid, but most often the nervous system is poisoned by its own excreta.

We may illustrate this last mode of production by an analogy. We know that the development and dissipation of the heat of the body are regulated by three nerve centers: the thermotoxic, the thermolytic, and the thermogenetic, and any disturbance of the balance between these centers results in a rise or fall of temperature. Just so we may be certain there are centers which preside over the formation and elimination of excrementitious substances, and a disturbance of the equilibrium between these centers induces these nutritive changes which lie at the base of neurasthenia.

Now, if this theory that neurasthenia is a toxemia be true, it throws a flood of light upon its treatment. As regards the use of drugs, every one who has had much experience in the treatment of neurasthenia comes inevitably to the conclusion that they are of very little value and are merely palliatives; that we have not a single remedy which is in any sense of the word curative. I could give you quotation after quotation in support of this, but this is the sense of them all. I often think that this disease was created especially to bring to naught those physicians who treat every thing symptomatically; the unthinking routinist and polypharmacists. You can go on for years relieving the symptoms with anodynes and sedatives, and you can "jolly" the patients with coca and kola and other nerve stimulants, but they will never get well. Many of the remedies advocated often do

What then, you will ask, is there left for us to do with such patients? It has always been a matter of great surprise to me that intelligent physicians should be willing to remain in ignorance of such powerful agents as diet, exercise, hydrotherapy, massage, and electricity. Not only this, but they look with suspicion upon those who employ them. All of these, with the exception of electricity, are as old as Hippocrates; they have held their own for two thousand years; they are used by the foremost physicians of France and Germany freely and intelligently. And yet we see constantly American physicians neglecting these wonderful simple remedies, and prescribing some proprietary "nerve tonic" or "nerve food." It has been demonstrated by chemical and microscopical examination that massage, electricity, and hydrotherapy increase the number of red blood cells and the amount of hemoglobin, likewise the amount of hydrochloric acid in the gastric juice and improve the motility of the stomach. As concerns exercise, it needs to be prescribed with extreme care, since, as Beard has remarked, it may be either the worst or the best of remedies.

I shall not make any detailed report of cases, but shall close with the remark that under the use of these remedies, combined at times with rest, I have seen patients who have been invalids for years restored to health and strength; I have seen patients who could hardly walk across a room at the beginning of treatment able at the end of seven weeks to walk five miles. One patient of mine who could not retain a teaspoonful of milk and lime-water on her stomach at first, and had to be nourished by the rectum, was eating three good meals a day in six weeks and drinking two quarts of milk besides. These results were brought about entirely by the group of remedies last mentioned. Surely these agents deserve to be studied and used by the profession far more than they have been.

LOUISVILLE.

ANESTHESIA.***BY HUGH N. LEAVELL, M. D.***Tutor in Physiology and Clinical Assistant in Diseases of the Eye, Ear, and Throat,
Hospital Medical College.*

The artificial induction of anesthesia by the use of drugs or inhalation of vapors is a subject of great interest, both historically and from its practical application to the relief of suffering and the treatment of disease. Although it is mainly owing to the researches of distinguished chemists and physicians of the present century that the employment of anesthesia has come to occupy a foremost place among remedies, there is abundant evidence to show that it is a practice of great antiquity. Besides the mention by Homer of the anesthetic effects of nepenthe, it also appears, from an old Chinese manuscript laid before the French Academy by M. Julien, that a physician named Hoatho, who lived in the third century, gave his patients a preparation of hemp, whereby they were rendered insensible during the performance of surgical operations. The soporific effects of mandrake are alluded to by Shakespeare, who also makes frequent mention of anesthetizing draughts, the composition of which is not specified.

Coming down to the present century, we find that in 1800, while experimenting on nitrous oxide gas, Sir Humphrey Davy discovered its anesthetic properties and described the effects it had on himself when inhaled with the view of relieving local pain. In 1818 Faraday showed that the inhalation of the vapor of sulphuric ether produced anesthetic effects similar to those of nitrous oxide gas; and this property of ether was also shown by the American physicians, Godman, 1822; Jackson, 1833; Wood and Bache, 1834. On September 30, 1846, Dr. Morton, a dentist of Boston, employed the vapor of sulphuric ether to procure general anesthesia in a case of tooth-extraction, and thereafter administered it in cases requiring surgical operation with complete success.

It was not until November, 1847, that Sir James Y. Simpson an-

nearly always brings out new ideas and theories when brought before a body of medical men. It seems strange that so valuable an anesthetic as chloroform should have elicited from so many eminent authorities such varied opinions regarding its merits. Unanimity of opinion seems impossible to attain, and will continue to be so so long as one class of investigators are experimenting in physiological paths and another observing its clinical aspects. The former class may be developing more theoretical knowledge in regard to it, but it is to the latter class that our interest is especially turned. The anesthetizer of this modern era of medicine has at his disposal not only a considerable number of anesthetics, but many ways of administering the same. The practice of employing one anesthetic for all cases is entirely out of date. We must vary our anesthetics and manner of using the same to suit the exigencies of the case. It is imperative that we study the case as much and many times more than we do the anesthetic and its administration. After a careful study of the case we should arrive at a conclusion as to which anesthetic will best insure the safety of the patient and act accordingly, provided, of course, the operation does not demand the use of a particular anesthetic. The operation itself may give rise to many conditions which must not be credited to anesthetic or anesthetizer. There is a tendency in one operation for respiration to become embarrassed, and in another circulation, entirely independent of other influences. Every one has seen the alarming symptoms which sometimes present themselves in severing a femur or reducing a dislocation of the shoulder joint. I think you will agree with me when I say that the anesthetist should have a general knowledge of surgery, medicine, and many of the specialties pertaining thereto. Our best work is done when we realize that all our energy is necessary to accomplish it, and, just so soon as anesthetists realize that in chloroform we have an agent demanding most earnest watchfulness, just so soon will the per cent of deaths be diminished. However, it is to be little doubted that many deaths have been produced through other influences, the impurity of the medicine itself being a potent factor.

Many discussions have arisen as to a general condition of a patient who will best bear an anesthetic. In regard to sex, women usually pass very easily into deep anesthesia, a fact which may be explained by their inferior physique. The disparity does not seem to be noticed between old men and old women to such an extent, and it may be safely assumed that they have about the same relation. They bear anesthetics

better than the young and more vigorous, being less liable to muscular spasm.

The anesthetic for the aged is chloroform; it does not stimulate respiration to such an extent as ether. This may seem paradoxical, but when we take into consideration that the chest walls are less elastic than in the young, that senile degenerative changes are present in the lungs, chronic bronchitis it may be, or a considerable emphysema, it is readily conceived that a tranquil anesthetic, such as chloroform, is demanded. Children bear anesthetics well, but we must not suppose that they are not susceptible to the toxic influences of an anesthetic. Respiratory rhythm is not as easily disturbed as in the older, and it seems that they are more easily rescued from dangerous accidents. Those of an equable temperament are usually easier to anesthetize than the neurotic type. Those addicted to the use of morphine, tobacco, etc., require more of the anesthetic than others. Abnormalities in the heart are to be especially noted in those addicted to the use of tobacco, tachycardia being the most frequent symptom. An interesting case was reported at a previous meeting demonstrating this condition. The healthy and vigorous adult is not always the one who bears an anesthetic best. He may of course be more able to undergo a strain imposed on his respiration or circulation, but offsetting this we have his increased liability to muscular spasm. We also find that the vital capacity is diminished at the rate of one cubic inch for every additional pound above one hundred and sixty-one until one hundred and ninety-six pounds is reached. In the light of more modern research it certainly must be established that the very muscular and large individual is not the one with whom we should feel safest in administering an anesthetic. On the other hand, the more fragile patients require less of the anesthetic to produce anesthesia, are less liable to muscular spasm, and on the whole are better subjects for anesthesia. In fatty degeneration of the heart muscle ether of course is the anesthetic *par excellence*. Reynolds says "in a large majority of cases of death while under the influence of chloroform fatty degeneration of the heart has been found." Regarding the comparative safety of the two most used anesthetics, ether and chloroform, statistics show that ether is five times safer than chloroform, that is five times as many deaths have been accorded to

duced by chloroform in man it is generally by cardiac arrest, sometimes by asphyxia." The cases I have seen presenting alarming symptoms tend to substantiate this assertion. The oft-uttered maxim, "Watch the respiration, keep it right, and every thing will move smoothly," is good as far as it goes, but with three fingers on the pulse, especially the radial, one feels infinitely safe. Those who maintain that the pulse should be disregarded during chloroformization will be far more likely to overstep the boundaries of safety. The pulse is of value as a corroborative landmark. When all the signs of deep anesthesia are present a marked slowing of the pulse may, for example, indicate that the anesthetic should be withdrawn for a while. In rare cases it is impossible to proceed beyond a certain point without inducing an intermittent action of the heart.

Whether syncope is caused by reflex disturbance at the first incision, or because of the toxic effect of the chloroform on the heart muscle itself, or the peripheral filaments of the pulmonic nerves, has not been clearly demonstrated. It would seem that either one may be a potent factor, and the combination of the three is not improbable. A solution of the problem may be found in the vasomotor system. There can be no doubt that vasomotor dilatation has a depressing effect on both the heart and respiration. Chloroform is, first, a vasomotor stimulant, and, secondarily, a vasomotor depressant. This adds another condition to be watched in chloroformization. For vasomotor depression atropine in doses of $\frac{1}{16}$ grain administered hypodermically is *the* remedy. It should not be given in too small a dose, as then we do not get its full beneficial effect. In doses of this size we also get its stimulating effect on respiration. If deaths have been caused by reflex disturbance at the first incision, it would seem that we should as far as possible guard against the cause, which is no doubt in many cases due to insufficient anesthetization. I firmly believe that the knife should be withheld until complete narcosis has been established. But I feel incompetent to refute this statement made by Noyes, "For a quick operation I often administer chloroform. The primary stage of anesthesia, before muscular relaxation has come and consciousness is not fully destroyed, and which lasts only a part of a minute, requires a very small quantity of

Profound anesthesia certainly abolishes many of the reflexes in which we have found a great element of danger. Recently a cocaine solution of one per cent has been used as a nasal spray before beginning anesthesia. It is claimed that this abolishes many of the reflexes which occur from the effect of the anesthetic on the terminal filaments of nerves. But the fact that the cocaine spray is not devoid of a great deal of danger seems to me to complicate rather than simplify matters.

To maintain profound anesthesia we have little workable room; we have then to avoid the dangers of too light anesthesia, and on the other hand the dangers of an overdose. The pupil and conjunctival reflex enables us to ascertain the depth of anesthesia to a great degree of accuracy. I have found this rule of service, viz., if the pupil is dilated and conjunctival reflex is present the chloroform should be increased, if the pupil is dilated and the conjunctival reflex is absent the anesthetic should be stopped.

A word regarding asphyxia and its treatment. Sylvester's method of artificial respiration is perhaps the best. Hare's method is also excellent. All methods are useless if the epiglottis remains closed or the soft palate is strapped down to the posterior surface of tongue. If this latter accident happens the only avenue for entrance of air is through the nose, which in many persons is obstructed by hypertrophies, polyps, etc. The position of the head, which will obviate these two difficulties, is extension with simultaneous projection forward. If now the feet be held, we get full dilatation of chest when the arms are elevated with greatest possible ingress of air. Dr. Hare's method is as follows: On the first indication of failing respiration the administration of the anesthetic is immediately suspended; an assistant steps on the table and takes one of the patient's knees under each arm and then raises the body from the table until it rests on the shoulders. The anesthetist in the mean while has brought the head to the edge of the table where it hangs extended and inclined forward. The patient's clothing is pulled down under the armpits, completely baring the abdomen and chest. Inspiration is then produced by placing the open hands on each side of the chest posteriorly over the lower ribs and drawing the chest well forward and upward, holding it thus for about two seconds. Expiration is produced by placing the hands on the front of the chest over the lower ribs and pushing backward and inward, at the same time compressing the chest.

I will now make a brief summary of what has been said in regard to chloroform, and leave the paper for your discussion.

1. The great differences of opinion regarding its physiological and clinical aspect.
2. The dangers of using one anesthetic for all cases.
3. The necessity of careful anesthetists.
4. The most muscular subjects, as a rule, are not the best subjects for anesthesia.
5. The effects of pernicious habits on the administration of chloroform.
6. The great necessity of watching the heart and vasomotor system as well as the respiration.
7. The value of atropia in chloroform accidents.
8. The necessity of profound anesthesia.
9. The value of the pupil and conjunctival reflex in gauging the amount given.
10. The posture of the head in asphyxial accidents.

LOUISVILLE.

UVULOTOMY.

BY HALPIN O'REILLY, M. D.

Prolapsus and hypertrophy of the uvula has ever possessed a most interesting symptomatology. Its existence entails both direct and reflex irritations, the sinister influence of which is graded from a simplicity and harmfulness entirely insignificant to a complexus of distresses that is seriously annoying and important. Fullness, stiffness, and dryness of the throat, accompanied by the sensation of a foreign body lodged therein, are among the more ordinary complainings. Paroxysmal coughing, aggravated by the recumbent posture, a sense of impending suffocation, hyperesthesia of the pharynx, asthmatic respiring, and tracheo-bronchitis are not infrequent epiphenomena.

Again, there is dysphagia, anorexia, nausea, emesis, anemia, insomnia, and emaciation, elements which collectively may mask this condition in the verisimilitude of phthisis.

The etiological factors of hypertrophy and prolapsus are many and various. Among others, predisposing or provocative, the following are usually enumerated: Vicissitudes of climate, exposure to night air,

vitiated atmosphere of unventilated apartments, dietetic excesses, inordinate use of tobacco, alcoholic indulgence, mouth-breathing from obstructions in naso-pharyngeal tract, catarrhal inflammations, fatigue, general depression, and neoplasms.

The diagnosis is established by inspection, the hypertrophied and lower organ, pale or slightly congested, being observed to extend downward sufficiently to impinge upon the epiglottis or dangle within the upper portion of the larynx. The cough has often a quality and a localization which are thoroughly characteristic. Unrelieved by medication or surgical interference the elongated uvula may be generally depended upon to drag its slow length along indefinitely. The therapeutics embodies the avoidance of exciting causes, a residence in a dry climate, with removal of indigestion, constipation, anemia, and general debility. Locally the uvula is treated by mild, caustic, stimulant, and astringent applications. These failing, resort is had to uvulotomy.

It is often impracticable to carry out the first of these suggestions, and most patient conservatism, if not unwarranted procrastination, must attend the thorough trial of milder local applications. Uvulotomy is radical and promptly beneficial. It was an ancient custom, familiar to Hippocrates. I am under the impression that it has faded from the memory or escaped the practice of most of our worthy contemporaries.

According to D. Bryson Delavan, in the olden time Paulus Aeginata devised for this operation a staphylagrum, a staphylotome and a staphylocaustum. To-day it is performed by means of one of the many ring uvulotomes, or a forceps and a scissors having a right lateral curvature. Serious hemorrhage is not expected to result from the abscission, but Dr. E. C. Morgan has collected twenty-three instances of this untoward occurrence. Erick, an Icelandic Saga, died from such a bleeding in the year A. D. 1035. The usual styptic remedies or the application of a small clamp will always secure safety in this regard. I look upon the procedure as one of the indispensables.

CASE I. A teacher, coughing, losing flesh, apparently in phthisis, and not improved under the exhibition of ol. morrhuae and syrup hypophos. compound, was restored to health in four weeks after uvular abscission. Her cough ceased, restful sleep followed, her flesh was regained, and her duties in school cheerfully and successfully resumed.

inflata, and all in vain. Here uvulotomy was followed in two days by embolism, aphasia, and hemiplegia. It was apprehended that the respiratory disease would add to the embolic effects a most unfavorable complication, but the asthmatic cough and oppression disappeared promptly after removal of the offending uvula, and the case progressed to a gratifying recovery from the aphasia and unilateral paralysis.

CASE 3. A workingman, unable to lie down and sleep, having laryngo-tracheo-bronchial irritation, was forced to give up his employment. After uvulotomy he quickly obtained rest, ceased coughing, and returned to his former avocation.

CASE 4. A girl of fifteen, acting under medical advice, discontinued her studies and left school on account of supposed well-established pulmonary disease. Removal of uvula was followed by prompt gain of flesh and strength, and immunity from ill consequences upon the resumption of her work in school.

These are a few types. There are others. Such results speak for themselves. Contrasted with the previous futile administration of expectorants and constructive tonics they are simply brilliant.

LOUISVILLE.

LEFT INGUINAL COLOTOMY FOR CANCER OF THE SIGMOID FLEXURE.*

BY A. D. PRICE, M. D.

W. W., aged fifty-two years, American, farmer ; ex-soldier of the late war ; married ; of good family history, and without syphilitic infection ; had always enjoyed good health until about the beginning of 1895. At this time he began to suffer pain in the left inguinal and lumbar regions, and was obstinately constipated. The pain and constipation continued to increase and he sought the advice of his family physician. His appetite had begun to fail, and the loss of flesh was marked ; he slept badly owing to the severe pain constantly present, and the constipation was relieved only at long intervals by drastic cathartics and rectal injections, the dejections being ribbon-like.

When the gut above the stricture was not distended with gas a small bougie could occasionally be passed.

* Reported to the Central Kentucky Medical Association, January 16, 1896.

He soon took to his bed, the pain being greatly increased and the constipation more obstinate.

After some months he came under my observation. His pulse was weak but not accelerated; his temperature normal; emaciation progressive; no vomiting; appetite bad; constipation absolute; pain great. The smallest bougie would not pass the obstructions. Every few hours the large bowel would become distended with gas and so remain until it gradually leaked through the stricture. The diagnosis was probable cancer, and colotomy advised as the only means of affording even temporary relief.

On September 6th, assisted by Drs. Forsythe and Wash, I opened the abdomen in the left inguinal region and found cancer of the sigmoid flexure with deposits in the mesocolon. An artificial anus was made, being completed at one sitting, as the frequent and strong peristaltic action and the constipation, there having been no action for two weeks, demanded such a procedure.

On the following morning there was a copious fecal discharge which gave great relief. The wound healed without suppuration or increase of temperature. He had a diarrhea for ten days, which necessitated the frequent changing of the dressings. After this his bowels became regular, having one natural movement a day. The pain ceased, and he was rendered comparatively comfortable. In two weeks he was out of bed and able to attend in a measure to his business affairs.

The cancerous affection has continued to increase, the patient is at this time confined to his room, while the end is doubtless near. The operation added several months to his life, rendered him reasonably comfortable, and enabled him to arrange his business affairs himself.

HARRODSBURG, KY.

THE PENNSYLVANIA COLONY FARM FOR EPILEPTICS.—The project of establishing a colony for epileptics, where country living and farm work, judiciously apportioned, would constitute the principal therapeutic treatment, which has been under consideration by the Pennsylvania State Legislature, has at length assumed a definite shape. The court has granted a charter for the "Pennsylvania Colony Farm for Epileptics." A gentleman of Philadelphia has offered to give \$50,000 for the erection of suitable buildings, providing that the farm be secured before January 1, 1896.—*Boston Medical and Surgical Journal.*

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, November 31, 1895, Dr. W. L. Rodman, President, in the chair.

The essay of the evening was read by Dr. John F. Barbour; subject, Neurasthenia. [See page 41.]

Discussion. Dr. A. M. Cartledge: The paper treats of a subject with which we all have to deal. In surgery neurasthenic individuals are among the most trying cases we meet. I was especially interested in his remarks on the theory of toxemia as the result of absorption from the intestinal canal. I am quite convinced that this is correct. One of the most marked cases of neurasthenia I have ever seen, after running the gauntlet of remedies, was perfectly relieved by stomach-washing, ridding him of an old gastric catarrh. I believe that all who have had occasion to use strychnine, iron, and the bromides will agree with what he has to say about them. But I would not like to exclude the entire materia medica; and there is one agent in which I have the most abiding faith. It is arsenic. The usual plan of giving arsenic, beginning with small doses and gradually increasing until toxic effects are produced, I think is a great fault in its administration. It is on a par with the administration of mercury "until it touches the gums." Fowler's solution should never be given in larger doses than four or five drops, and it should be kept up for weeks and months. I would fully agree with Dr. Barbour that in the treatment of neurasthenia the first thing to be done is to search out the cause.

Dr. J. G. Cecil: Like the other gentlemen I was very much entertained, and enjoyed Dr. Barbour's paper very much. I regret very much that he did not prolong his paper and give us a little better idea of the treatment upon which we must rely. I take it one of the hardest things in the treatment of this disease is to divorce the patient from drugs, to get the patient's confidence, and to carry out the plan of treatment outlined by Dr. Barbour. I am very much in accord with the remarks made by Dr. Cartledge with reference to the use of arsenic; I have great faith in it as an alterative. Its effects are very remarkable when the drug is persistently given. I have not yet

gotten to the point that I can leave off medicinal agents altogether in the treatment of neurasthenia. I believe much good can be accomplished by medicines in conjunction with the treatment he describes.

Dr. Wm. Bailey: I am delighted very much with Dr. Barbour's paper, but at the same time am constrained to differ somewhat with him, and I think I can differ very safely from him by taking his own method of treatment. Why can we not use medicinal agents to accomplish what he claims for electricity and massage? Why may not medicinal agents be used in conjunction with these, which I recognize to be entirely proper? The only exception I take is his total rejection of the armamentaria usually called medicine. In gastro-intestinal catarrh, with fermentation of food, he improves the condition by suitable diet; why might he not aid digestion by other means as well? I was very willing to have him reject the bromides, because when we take into account what the physiological effect of these remedies is we ought to consider them contra-indicated. I would like to say that climatology ought to have a good deal to do with the treatment of these cases. It is claimed that no class of patients is benefited more than neurasthenics by the climate of Colorado. It has been shown that the red blood corpuscles very rapidly increase, as does also the percentage of hemoglobin. I can not agree that we have no power to furnish to the nervous system a force which it has lost. I believe it is true that any element in the body which is deficient can be improved by the administration of that element. Believing that the phosphorus is deficient, I would for the general betterment of my patient give him phosphorus. I believe, also, that if iron be properly given in small doses it does not in these cases interfere with nutrition.

Dr. John L. Howard: I fully appreciate how little is left for the general practitioner, but this is a class of patients I would willingly turn over to the nerve specialist. About a year ago I attained some unsought notoriety from some hypnotic experiments. Among a number of patients that were sent to me to be cured by hypnotism was a lady with neurasthenia. The attempt to relieve her failed utterly, and I shall never try it again. I was called to see her early and late, but without any benefit whatever to her. The question with me is, is neurasthenia ever cured? As a rule only the rich have this trouble, and most of the patients are women. I remember one lady who assured me that if she traveled she would have complete relief. With respect to electricity, it has been my experience that more benefit is derived

from static electricity than from galvanism or faradism. I have seen some benefit from static electricity in men, but in women never. General faradization has done no good.

Dr. F. C. Wilson: I suppose all of us must confess to having run the gauntlet of remedies for neurasthenia. I have always believed that we paid too little attention to these cases, ordinarily, in the way of diet, exercise, sleep, etc. It is a question in my mind as to how much advantage can be ascribed to electricity beyond the exercise which it gives to the muscles. Massage is simply exercise without exertion or fatigue, and if judiciously and systematically used is of great assistance. Unless the confidence of the patient is secured, much time and much effort will be wasted. If it is secured, the same remedial agents will accomplish a great deal more good.

Dr. Wm. Cheatham: I arise to put in a word for the oculist and to condole with the general practitioner, for it seems the general practitioner's chances are getting smaller and smaller every day. I have seen cases of neurasthenia where the neurologist has been unable to remove the eye symptoms by his treatment. We often find marked errors of refraction in so-called neurasthenics; glasses alone relieving all symptoms.

Dr. S. G. Dabney: I want to express my appreciation of the paper, which is a very interesting one and most excellently written. He has described very graphically the difficulty which we have in fitting these patients with glasses. I do not think I will leave the subject too far if I mention the case of a lady whom I attempted to fit with glasses. The case illustrates the effect of remote reflexes on the eyes. Her eyes would tire in a few minutes, and it was quite impossible to bring her vision up to perfect with any glass. She had some rectal trouble, and when that was relieved her eyes were again examined, and without any difficulty the appropriate correction of her refraction was made.

Dr. J. M. Ray: In many cases of eye trouble in neurasthenic persons improvement of the eye symptoms very quickly followed scratching the conjunctiva. I know of one case where, after all kinds of treatment had failed, permanent relief followed tenotomy of the eye muscles. I have never divided the eye muscles unless there was some decided indication for it.

Dr. Barbour (closing discussion): Concerning the use of electricity, chemical examination has shown that electricity increases elimination, and therefore it is indicated when elimination is deficient. It

has been shown that it increases the number of red blood corpuscles and the percentage of hemoglobin. As to the use of arsenic—I must confess if there is any one remedy that has an effect it is arsenic. I did not mean to say that errors of refraction never cause nervous phenomena, but the correction of errors of refraction does not cure neurasthenia. If I stood alone in my views concerning the extremely little use of drugs I might be inclined to back down a little. What I wanted to bring out in this paper is that you can not cure neurasthenia by medicines alone. We should always remember the excellent division of remedies which Prof. Thompson used to make—symptom remedies and disease remedies. With the possible exception of arsenic we have no disease remedy in neurasthenia. We do not pretend to cure all these cases any more than anybody pretends to cure all cases of any sort. In many cases there are conditions which we can not get at, and as long as they persist massage and electricity can do no good.

JOHN L. HOWARD, *Secretary.*

Reviews and Bibliography.

Pregnancy, Labor, and the Puerperal State. By EGBERT H. GRANDIN, M. D., Consulting Obstetric Surgeon to the New York Maternity Hospital; Consulting Gynecologist to the French Hospital, etc., and GEORGE W. JARMAN, M. D., Obstetric Surgeon to New York Maternity Hospital, etc. Illustrated with forty-one photographic plates. 261 pp. Philadelphia: The F. A. Davis Co., Publishers. 1895.

When an author desires or aims to be brief and purely practical in any production of his pen, it is purely a matter between himself and his prospective reader. There are readers who want brief and practical works, and there are others who are quite incapable of grasping comprehensive theories, or even general principles, many of them never learning what theory means. If a writer finds enough of these classes to buy his books, and make money for him, for great reputation there can not be in it, why, let him write them.

But when an author puts himself on a level with one of these readers, one who does not know the difference between theory, hypothesis, and idle speculation, in denouncing theory, as he calls it, some might be found to protest.

The authors would have us believe that the last decade has witnessed something like a revelation in the practice of obstetrics, whereas there are complaints by good observers that the last ten years have been characterized by the neglect of obstetrics.

The writers have a side-blow also for other authors as to illustrations. They tell us that "it has not been deemed advisable to insert the numerous wood-cuts which from time immemorial have been copied from one work to another, since the majority teach nothing which can not be learned to better advantage at the bedside," as if, indeed, any visible action or work could be taught better by figures than by actual bedside observation. After such criticism one would hardly expect to find, as here, five full pages taken up with three full-page cuts of front view, top view, and rear view of the fetal skull, or another two leaves taken up with a picture gallery of attendants, two thirds of them standing by and looking on, to illustrate in a rather obscure way the manual expression of the placenta. However, we suppose all this and much more such belongs to the new school of practical obstetrics.

As for the doctrines taught, little is found that is not worthy of approval from the standpoint of current teaching. It can be further said in its favor that, like the cuts, the type is large and well spaced and well suited for reading by old men who have outgrown "theories."

D. T. S.

Practical Dietetics with Special Reference to Diet in Disease. By W. GILMAN THOMPSON, M. D., Professor of Materia, Therapeutics, and Clinical Medicine in the University of the City of New York, etc. 802 pp. New York: D. Appleton & Co. 1895.

The author opens his preface by criticising the general nature of the instructions given by physicians to their patients, but one can not but be puzzled to decide whether general directions to the nurse or patient to feed carefully or to feed generously do not result in more good than the endless particulars of the average treatises on diet.

The human stomach and the ancestral stomach have been several eons learning how to select food, and any stomach assisted by a sensible head can make its selections by experience about as well as by precept. It is to be said of Dr. Thompson's work that it does not go to the extremes reached by many authors; but one would read with greater satisfaction to learn from the author's work that he himself when sick paid the least regard to his own teachings, aside from eating such things and in such quantities as were agreeable to his stomach. As an example of the contradictory teachings of authors, on page 658 Tyson, Porteus, and the guild generally are spoken of as recommending a milk diet in diabetes; on the next page Dujardin-Beaumetz, Flint, and many others are said to prohibit milk in any form. Now, if any two diseases are relegated to dietetic treatment above all others, they are diabetes and Bright's disease, yet with a taste of personal experience we would prefer death, eating what we felt like, to dragging out a puzzled existence trying to find out just when we might eat the flank of a herring or a brisket of salmon, and which side of the cheek we should chew it on.

This work, however, contains a great deal of most important teaching in regard to diet. Indeed, it appears to be exhaustive of the present knowledge of the subject.

D. T. S.

The Science and Art of Obstetrics. By THEOPHILUS PARVIN, A. M., M. D., LL. D., Professor of Obstetrics and Diseases of Women and Children, Jefferson Medical College, etc. Third edition, carefully revised. Illustrated with two hundred and sixty-nine wood-cuts, and two colored plates. 685 pp. Philadelphia: Lea Brothers & Co. 1895.

In the department of obstetrics America has attained to the very front rank, at least two of her complete text-books being of the first order of merit.

This work of Dr. Parvin, having been thoroughly revised, is now in its third edition, and is more than ever a worthy claimant of professional approval.

A marked characteristic all the way through is that it carries the air of a teacher, who, while he wastes no words, is yet reading your mind to see that you understand every subject. This is marked in his definition of terms as well as in description of processes and operations. In this more than any thing else lies the probability of improvement in the science and practice of obstetrics. So long has the subject in all its phases been presented to the test of observation in all its forms, nearly every thing possible having perhaps been thought of, that now more than any thing else it remains to settle judiciously the mooted points and in such language as is most accurate, explicit, and attractive.

These merits are prominent in this treatise, and more than ever will Parvin's Obstetrics become a favorite with teachers, students, and practitioners.

D. T. S.

Weekly Abstract of Sanitary Reports. Issued by the Supervising Surgeon-General, M. H. S. Vol. IX, Nos. 1 to 52. 1284 pp. Washington: Government Printing Office. 1895.

Since the retreat of cholera has got so well under way, the principal professional interest in this volume is the report of Dr. Kinyoun on his observations of the preparation and use of diphtheria antitoxin in Germany. This report, while showing a prudent conservatism, is on the whole favorable.

The International Encyclopedia of Surgery. A Systematic Treatise on the Theory and Practice of Surgery. By authors of various nations. Edited by JOHN ASH-HURST, JR., M. D., LL. D., Barton Professor of Surgery and Professor of Clinical Surgery in the University of Pennsylvania; Surgeon to the Pennsylvania Hospital, etc. Illustrated with chromo-lithographs and wood-cuts. In seven volumes. Volume VII (supplementary volume). 1082 pp. New York: William Wood & Co. 1895.

The International Encyclopedia of Surgery which appeared seven years ago was promptly accorded place as one of the soundest, best arranged, and most thorough works on surgery that had up to that time appeared. For literary excellence it is surpassed by no other similar production. The object of this supplementary volume, says the editor, is to furnish to the readers of the International Encyclopedia of Surgery a brief but sufficient

account of such additions to both surgical science and surgical art as have been brought forward during the seven years that have elapsed since the revised edition of the original book was published, and as have seemed of sufficient importance to justify their incorporation in a book of this character.

There are forty-eight contributors to this volume, representing all the principal medical colleges in the country, and embracing all but a few of the eminent names in the Union. The entire list is American. With this work to supply deficiencies in the old work, those who are the fortunate possessors of those classic volumes will feel that they are many times increased in value

D. T. S.

A Text-Book of Physiology. By M. FOSTER, M. A., M. D., LL. D., F. R. C. S., Professor of Physiology in the University of Cambridge, and Fellow of Trinity College, Cambridge. Sixth American edition, thoroughly revised, with notes, additions, and two hundred and fifty-seven illustrations. Philadelphia: Lea Brothers & Co. 1895.

That Professor Foster is an authority on this subject is beyond a question. The sixth American edition of this popular text-book makes its appearance with the announcement that "useless verbiage has been omitted, obscure sentences have been revised, a large number of typographical errors have been corrected, histological details have been materially abridged, etc." The book is essentially up to date, and as a whole is in a better form for the student. The histology of the nervous system has been retained in full, as has also the chemical appendix. The name of the American editor is not given.

J. L. H.

The Art of Compounding. A Text-book for Students and a Reference Book for Pharmacists at the Prescription counter. By WILBUR L. SCOVILLE, Ph. G., Professor of Applied Pharmacy and Director of the Pharmaceutical Laboratory in the Massachusetts College of Pharmacy. 264 pp. Price, \$2.50. Philadelphia: P. Blakiston, Son & Co. 1895.

This volume, intended for pharmacists, can not be of great value to physicians, except those in country places who compound their own prescriptions. Still, as the good housekeeper likes now and then to look into the kitchen in order to ascertain how the cooking is done, so in these pages a physician may now and then take a peep behind the counter with both pleasure and profit.

D. T. S.

Hand-Book of the Diagnosis and Treatment of Skin Diseases. By ARTHUR VAN HARLINGEN, Ph. B. (Yale), M. D., Emeritus Professor of Skin Diseases in the Philadelphia Polyclinic. Third edition, enlarged and revised. With sixty illustrations.

There is one small matter that might be commended to the author's further investigation. On page 26 he condemns the practice, advocated by some, of passing cold sounds through the urethræ of boys and young men for the cure of acne. He denounces it as cynical and without support of adequate evidence. Further investigation would doubtless convince him that this method is quite effectual, and that these men are most successfully mining for gold. The book compares quite favorably with the best American works of its class.

D. T. S.

A Treatise on the Nervous Diseases of Children, for Physicians and Students. By B. SACHS, M. D., Professor of Mental and Nervous Diseases in the New York Polyclinic, etc. 656 pp. New York: William Wood & Co. 1895.

Of the great numbers of physicians who from all over the land have attended the New York Polyclinic, probably not one has gone away without carrying good reports of the clearness, earnestness, and impressiveness of the lectures of Dr. Sachs on nervous diseases. To all such, and to all who have received the flattering reports of Dr. Sachs' lectures, this work will come as a welcome contribution to nervous diseases.

That the work is thoroughly up to date need hardly be said. In addition to the many excellencies characteristic of the author's teaching, the letter-press is exceptionally attractive, the type being large, while the illustrations are apt and original.

D. T. S.

Modern Medicine and Homeopathy. By JOHN B. ROBERTS, A. M., M. D.

This volume is intended as an exposition of the points of similarity between the system of therapeutics devised by Hahnemann and the science of medicine at the end of the nineteenth century. Dr. Roberts sets out by showing that there are very large numbers of regular physicians whose education is so defective that they do even more harm than homeopaths, while there are actually very few homeopaths who believe in or practice the insanely grotesque vagaries of Hahnemann and some of the almost idiotic zealots among his followers. There can be little doubt that in another generation the views of Dr. Roberts will be realized, and the gulf between reformed homeopathy and the rational school of physicians will be completely filled up.

D. T. S.

Modern Materia Medica, with Therapeutic Notes. For the Use of Practitioners and Students of Medicine. By Dr. OTTO ROTH. Seventh edition. Revised by Dr. GREGOR SMITH, Würzburg. One volume of 467 pages, octavo, muslin binding. Price, \$2. New York: William Wood & Co.

Modern Materia Medica was translated some years ago for Wood's Medical and Surgical Monographs. It proved so popular in that series that it was soon after printed in book form, and its popularity has been so great that the publishers have completed a translation of the seventh edition recently published in Germany. This revision brings the work up to the present time, including the important new drugs. A leading feature of this work is its prescriptions, and the clear, concise, and practical style in which it is written renders it eminently helpful.

D. T. S.

Foreign Correspondence.

LONDON LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

Registration of Sickness; Ninety-nine Years of Age and Burned to Death; Mortality in Ashantee; A New Bath at Bath; The Schott Treatment; Care of Feeble-Minded Children; The Vaccination Acts; The Urine in Epilepsy; Is Drunkenness Decreasing? etc.

Dr. Newsholme, at a meeting of the Royal Statistical Society, gave a history of the progress which had been made in the attempts to establish compulsory notification and registration of sickness both in England and abroad. He approves of the German system, which he thought came nearer than any other to a national system of registration of disease. In dealing with proposals for adoption in this country, he laid stress on the importance of not limiting the scope of preventive medicine, which should embrace tubercular and respiratory diseases, alcoholism, insanity, and many others, the only condition beyond the scope of preventive medicine being old age. Dr. Newsholme advocates that all cases of sickness treated at the expense of public funds, or by means of public charity, or in friendly or other sickness assurance societies, should be periodically notified to the medical officer of health, as well as all accidents and diseases to which persons engaged in various industries were specially subject. The most urgent of the reforms which he advocated was the collection and tabulation of the cases attended at the expense of the public funds or in public institutions, the only obstacles to it being the *vis inertiae* of the responsible heads of government departments, and the expense that would be incurred.

An inquest has been held at St. Bartholomew's Hospital on the body of a man ninety-nine years of age, who was burned to death, his bed having caught fire while he was smoking in bed.

In the last Ashantee war there was a European force of 1,578 men who were ashore between fifty and sixty days. Sickness among this little handful of soldiers amounted to 73 per cent, 43 per cent being invalided home. Of this sickness 59 per cent arose from malarial fever, 13 per cent from dysentery, and 28 per cent from other causes. The actual mortality amounted to one per cent.

The new thermasoolbad at Bath is a great success. Literally the term means a hot brine bath, but it is also one highly carbonized, and its special service is in the treatment of affections of the heart, with occasional application in cases of anemia, scrofula, certain forms of paralysis, gout, and rheumatism. Carbonic acid gas is added plentifully to the water, and at times an

extra ten per cent of salt, and it is found that with a temperature ranging from 80° to 95° the body of the patient becomes covered with myriads of the globules of the gas, which is thought to be absorbed by the skin together with the bath salts. The general plan followed is that of Dr. Theodore Schott, of Manheim, recommended as an important addition to cardiac therapeutics. At present this is the only thermasoolbad in the United Kingdom, and the cure is practiced under rules laid down by a committee, which prescribes the most careful precautions. Dr. R. F. Leith, who has been studying the Schott treatment of chronic heart disease, both at Manheim and by means of artificially prepared baths at home, classifies the cases which have come under his observation, and believes that the system has no direct action upon the heart, such as Dr. Schott and others have taught. He thinks diminished area of cardiac dullness is due chiefly to increased lung expansion. In studying the effect upon the pulse he tested in turn by various observations the influence of rest, temperature, the simple thermal bath, the various saline and effervescent baths, and as a result considers that all of these factors have some influence. With regard to hemocytometric examinations of the blood, before and after the baths, he found no decided results. Dr. Leith thinks that the main action of the baths lay in the periodic alterations in the distribution of the blood and its pressure, in the effects upon the skin and kidneys, and in the osmosis of the lymph streams; by these means errors of nutrition were corrected. Proper cases for the Schott treatment should be selected with great care, as the system, although valuable, was capable of doing much harm.

An army surgeon, recently returned from India, advocates the use of neutral tannate of quinine for prolonged use, as he has found that tabloids of quinine frequently pass through the digestive tract without being absorbed.

Sir Richard Quain, referring to the revision of the British Pharmacopeia, said that considerable progress had been made. The valuable suggestions made by medical authorities in this country, and the whole of the proposed additions and omissions has been carefully considered, and some part of the work was already in type.

Dr. F. Warner, in an address on the care of defective and feeble-minded children, said that out of 100,000 children examined between 1888 and 1894, 3.5 per 1,000 were found mentally feeble. The census returns showed that there were 6,730,000 of a school age, and the percentage mentioned would give no less a number than 23,400 children who were mentally defective. Males slightly predominated in this class. On the other hand males had a greater tendency to improve or recover from attacks of insanity than females.

Until the report of the Royal Commission on Vaccination is published the subject of compulsory vaccination appears to be getting into a some-

tor's account for vaccination during a quarter came to one shilling and sixpence, one child having been presented to be operated upon. The rent for the station being twenty shillings per quarter, the vaccination of this infant cost the rate-payers twenty-one shillings and sixpence.

A well-known prison medical officer is paying attention to the alleged discovery that on the evening preceding an attack of epilepsy, the toxicity of the urine is greatly diminished, but immediately after the attack it increases in a very marked manner and diminishes progressively afterward. It is hoped that in the case of prisoners simulating epilepsy the fraud will, by means of the examination of the urine, be easily detected.

Mr. Whyte, of the United Kingdom Alliance, controverts the statement that sobriety is increasing. He says that of 4,200 and odd males over 25 reported, or 45 per cent were habitually moderate, 25 per cent careless, 30 per cent more or less distinctly intemperate, and 15 per cent decidedly so. From these figures it appears that between a sixth and a seventh of the men referred to died hard drinkers, and on the average shortened their lives a little over ten years through drinking. From certain tables it appeared that while laborers and artisans lost 10.9 and 13.1 per cent respectively of their number through drink, the middle and upper classes lost 20.4 per cent, and the tradesmen 16.9 per cent from the same cause.

The French Government has subscribed £400 toward a proposed statue to Pasteur to be erected in Paris.

LONDON, January, 1896.

Abstracts and Selections.

MICRO-ORGANISMS ON COINS.—The *Revue d'Hygiène* publishes an interesting account of some experiments made at the bacteriological laboratory of the Military Hospital of the Dey at Algiers. Dr. H. Vincent explains that money is specially liable to be contaminated by saliva, pus, pathological secretions, dust, and the morbid germs that may be found in dirty pockets or on dirty fingers. He does not think, however, that evidence of this danger can be easily obtained by placing dirty coins in culture broth. The investigations at the Dey Hospital were conducted in a different manner. A piece of cotton-wool about the size of a pea was dipped in water and sterilized. Pieces of wool thus prepared were seized with pincers that had been held in a flame and were gently passed over the coin to be examined. The pieces of wool were then placed in culture broths and kept in a temperature of 35° C. The product, which soon contained various micro-organisms, was sown anew in gelatine plaques so as to isolate the bacteria. In other cases it was inoculated in doses varying from one to five cubic centimeters, in the blood or under the skin of rabbits, guinea-pigs, and white rats. A

lengthy description of the methods employed and the results obtained is given. The number of bacteria found on the surface of coins varied very considerably, on silver and gold from four hundred and sixty to thirty-five hundred, and on copper a still larger number. To destroy many of the non-pathogenic microbes some experiments were made at a temperature of 37° C. The injection of mixed cultures from coins only produced death or serious results in about one out of every ten inoculations. Death was sometimes rapid, with symptoms of acute septicemia. In one case tuberculosis was communicated to a rabbit by a piece of wool which had been passed over a ten-centime copper coin. In another case there was slight tetanus. There can be no doubt that germs of disease are often to be found on the surface of coins, notably the microbe of suppuration, the staphylococcus pyogenes, and the streptococcus. Nevertheless, as the experiments were repeated they proved that there were fewer infectious germs than had been anticipated.

Another series of experiments was then made which demonstrated that, though coins are often contaminated they possess in themselves antiseptic qualities which greatly reduce the risk. If pathogenic germs are placed on coins it is seen that they do not live long. The time varies according to the temperature and the nature of the metal. In a cold temperature the germs of typhoid fever and the Friedlander bacillus are killed in eighteen hours if placed on a sterilized copper or silver coin; and the pyocyanic bacillus and that of green diarrhea in twenty-four hours. At a temperature of a pocket, about 36° C., the bacilli of typhoid fever, of blue pus, of diphtheria, and the streptococcus are destroyed in less than six hours. The bacilli of diphtheria are among the most tenacious, and in cold will live three days on silver and six days on bronze. Gold, of course, is less antiseptic, and the Eberth bacillus will live five days and that of diphtheria six days on a gold coin in a temperature of 20° C. At a damp temperature of 36° C. the destruction of the microbes is very rapid, and that is the temperature which often prevails in the pockets of clothes.—*Medical Record*.

TREATMENT OF PRURITUS VULVÆ.—Pruritus of the vulva is sometimes symptomatic and sometimes idiopathic. In the first case it depends upon some genital affection, and accompanies eruptions of the vulva, or its irritation by the leucorrhœic discharge of vaginitis, of metritis, or of cancer; it occurs also during pregnancy, and in women suffering from diabetes.

But besides these cases, where the pruritus accompanies some trouble in the genital system, there are instances where it is impossible to explain the intolerable itching which the patient experiences.

When the pruritus is symptomatic it is necessary to attack, first, the cause which produces it, whether gynecological, diabetic or whatever it may be, and to build up the general nutrition. At the same time it is well to begin a local treatment, which is the same as that used when the disease is idiopathic. This consists of the application of lotions, morning and

evening, of very hot water (45° to 50° C.), with the addition either of chloral (one per cent), of coal tar, or of aromatic vinegar. Besides this, any one of the following preparations may be used :

Chlorhydrate of cocaine,	1 gram ;
Distilled water,	10 grams.

To be applied on a bibulous tampon.

Or,

Menthol,	3 grams ;
Olive oil,	1 gram ;
Lanoline,	6 grams.

Or,

Bichloride of mercury,	2 grams ;
Alcohol,	10 grams ;
Rose water,	40 grams ;
Distilled water,	450 grams.

If these means fail, one may try electrization with either the continued or interrupted current.

As a last resort in these very rebellious cases in which the itching resists all treatment and deprives the patient of rest and sleep, it may become necessary to practice resection of the affected part.

LACTOPHENINE.—The Paris *Journal de Medicine* devotes a whole page to this preparation. It is an antipyretic, antineuralgic, and analgesic, and is said to have all the good qualities of antipyrine and phenacetine, without their defects.

The author cites many trials of the drug by various investigators and physicians, among whom are Jaksch, Schmiedeberg, Jaquet, Landowski, Jissler, Hermann Strauss, Stamberg, etc. He describes Prof. Jaksch's trial of lactophenine in eighteen cases of typhoid fever as follows :

"The results were favorable in every instance. Several of the patients to whom it was administered had a temperature of 40° C., benumbed sensibility, extreme prostration, or were even in a state of coma. Under doses of from half a gram to one gram, given in cachets, repeated according to the temperature and general condition up to six grams a day, the fever was reduced and the patient became calm.

"Moreover, the temperature does not rise again suddenly, there is no moment of reaction, of chill, or sweats, and during its absorption there is no fear of the unpleasant effects frequently produced by the anilines, such as cyanosis, vomiting, exanthema, vertigo, etc. On the contrary, in typhoid fever, lactophenine produces a great sedative effect. Delirium disappears and a permanent improvement follows, which is proved by a sense of hunger, coming sooner and being more marked in these patients than in those on other treatment."

Following Prof. Jaksch, Dr. Hermann Strauss, of Giessen, in experimenting with the drug, had similar results. In an article published in the *Therapeutische Zeitung*, Dr. Strauss says that since, for many reasons, the

treatment of typhoid fever can not always be hydrotherapeutic, we must often resort to drugs in order to reduce the temperature. After condemning antifebrine as dangerous, and many other antipyretics, such as pyridine, salipyrine, and phenactine, as inefficient, he concludes :

"Proof was reached by a comparative experiment, in which phenactine, three hours after ingestion, presented very unfavorable symptoms: profuse sweats and a state of syncope, necessitating large doses of alcohol, this state lasting until the next day. Lactophenine, on the other hand, left the patient calm, free from intoxication, and even in good spirits. The effects were complete and in regular order."

There were reports of the use of lactophenine in pneumonia, influenza, erysipelas, etc., diseases characterized by high temperature with delirium. The results were uniformly good, the effect being sedative as well as antipyretic.

TREATMENT OF ANAL PRURITUS.—Try first irrigation and hot lotions repeated two or three times a day. The patient must carefully avoid constipation, and never go to stool without first taking an injection of oil and greasing the anus with vaseline.

Try, then, in the order mentioned the following prescriptions :

A. Local application night and morning of the following :

Alum,	4 grams;
Calomel,	2 grams;
Glycerine,	20 grams.

B. Calomel,	4 grams;
Vaseline,	30 grams.

C. Oleate of cocaine,	$\frac{1}{8}$ parts;
Pure lanoline,	3 parts;
Vaseline, }	2 grams.
Olive oil, }	

D. Red oxide of mercury,	4 grams;
Vaseline,	30 grams.

E. Apply in the anal orifice a tampon of bibulous cotton, a tampon wet with a solution of the oxide of zinc, 4 parts in 30.

F. Cauterize the region with a solution of silver nitrate, 1 to 10.

G. In quite rebellious cases recourse must be had to scarification or to cauterization with the galvano-cautery.—*Journal de Medicine.*

HEREDITY AS AN ETIOLOGICAL FACTOR IN LEPROSY.—The following struck me as an interesting set of cases in proof of heredity rather than contagion as a factor in the spread of leprosy :

Case 1. A man, aged twenty-two, well developed, presented himself with a slight scaly appearance on parts of his arms and slightly hypertrophied spots of about half an inch in diameter on his upper lip. The first symptoms appeared on the outer part of his thigh nine years ago, where in one

year two ulcers appeared, healing in three months, and leaving scars now visible. Now the skin in several places is roughened and inclined to be scaly.

Case 2. A girl, aged fifteen, sister of patient mentioned in Case 1, with tubercles on both alæ nasi and lobes of both ears, together with an offensive ozena. The disease commenced eight years ago on the outer part of the thigh as a white scaly spot, which increased in size. The feet are now swollen, and there are ulcers on the plantar surfaces. This case led me to inquire into the family history.

Case 3. The father of the above mentioned patients had presented the same symptoms for thirty years. He had ulcerations all over his body. One of the toes had gone, in fact his was a typical case of leprosy. The interesting part is that the wife, the mother of both children, is perfectly healthy.

The popular feeling here is strongly in favor of the view that leprosy is spread by contagion. I presume it may spread in both ways, though as far as my experience goes heredity, rather than contagion, has to bear the blame.—*Dr. A. H. Henderson, of Moné, Shan States, Burma, in New York Medical Record.*

CONJUNCTIVITIS DUE TO LARVÆ.—Baquis, of Leghorn *Annal. di Attal-mol.*, Fascic. 4, 1895), relates a case of acute conjunctivitis due to the larvæ of one of the tachinariæ (class diptera) being deposited in the conjunctival sac. The patient, a mechanic in the naval dock-yards, was at his work in the morning when an insect flew into his eye and then off again. The eye became irritable, and on this increasing a comrade examined it and saw some grains of what he took to be sawdust. The eye was washed out, and this afforded some relief for the time; but by the evening the pain was very great, the lids swollen, and the conjunctiva very injected. On evert-ing the lids Baquis found a number of whitish little bodies, the size of a fly's egg, which moved about rapidly; when he attempted to remove them he found it impossible to do so, as they fixed themselves to the conjunctiva. On instilling cocaine the movements of the larvæ became quieter, and they allowed themselves to be removed. The eye was then irrigated with perchloride of mercury, 1 in 4,000, and three fourths per cent sodium chloride, and was quite well on the third day. Microscopical examination of one of the larvæ showed it to be elliptical in form and made up of twelve metameres; each metamere was provided with lateral setæ, of which there was also a median ventral series. Its movements were vermicular. Nearly all the members of the family of tachinariæ deposit their eggs on other creatures, principally caterpillars, where they develop into larvæ. Baquis had heard of two other cases similar to his own.—*British Medical Journal.*

THE EFFECTS UPON THE TESTIS OF LIGATURE OF THE SPERMATIC ARTERY AND VEINS.—Griffiths (*Journ. of Anat. and Phys.*, October, 1895,) gives the results of investigations undertaken with a view of determining

the structural changes that supervene in the testes after ligation of the spermatic blood-vessels in the dog, in which animal the vascular arrangement of this organ is the same as that in man. Ligation of the spermatic artery in a full-grown dog, the author has found, leads within a few days to great diminution in the bulk of the testis, caused by rapid destruction from degenerative changes in the seminal tubules, but after a time the remaining tubules may recover to such an extent as to be again capable of producing spermatozoa. Ligation of all the spermatic veins leads to great swelling from engorgement of the veins and extravasation of blood into the intertubular connective tissue, and to necrosis of the epithelial cells in the seminal tubules. This condition would ultimately cause almost complete disappearance of the seminal tubules and atrophy of the gland. Ligation of the spermatic artery and veins in puppies leads to great swelling of the testes, followed by gradual diminution and atrophy of the seminal tubules, and to atrophy of the organ altogether. Ligation of the spermatic artery and veins in full-grown dogs may lead, according to conditions not yet known, to (1) sloughing of the testes, (2) complete atrophy, and (3) temporary fatty degeneration of spermatogenetic cells in the animal, which may be followed by complete recovery.—*Ibid.*

PREDISPOSING CAUSES IN FACIAL PARALYSIS.—Neumann (*Neurol. Centralbl.*, October, 1895,) considers that in most cases where cold is the exciting cause of so-called rheumatic facial paralysis, there is also a predisposition which in many cases is hereditary. Two cases are quoted in which facial paralysis arose from quite trivial causes in patients whose antecedents showed in the one case migraine in the mother, and neurasthenia, with facial twitchings, in the father; in the other, facial paralysis in the father and insanity in one aunt. In such cases hereditary weakness of nerve tissue, particularly of the facial nerve, is supposed to predispose to the molecular changes which interfere with conduction. These changes, although in the severer cases presenting the appearances of parenchymatous neuritis, may show no visible change in the slighter ones. The predisposition may, however, be acquired. The facial paralysis occurring in association with certain constitutional diseases, for example, diabetes, syphilis, tuberculosis, would be thus explained, the general disease weakening the nervous tissue, and thus predisposing to the local condition on exposure to some local cause, however slight. The special liability of the facial nerve to be affected he considers due not so much to its exposed position, else the ulnar should often be affected, but to the large number of lymphatics and lymphatic glands surrounding it at its exit from the stylo-mastoid foramen. Stagnation of lymph would favor morbid changes in the neighboring nerve, and such stagnation would be particularly likely to occur at night; hence the frequency of nocturnal onset of facial paralysis.—*Ibid.*

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÆ."

Vol. 21.

SATURDAY, JANUARY 23, 1896.

No. 2.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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MILK SUPPLY.

At a meeting of the New York Academy of Medicine, on the 10th ult., the question of the milk supply of New York City was under discussion. The subject was introduced by Dr. George B. Fowler, Health Commissioner, who stated that the daily average amount of milk brought to the city was 19,164 cans, each can holding 40 quarts. The significance of this large quantity of liquid perishable food as a promoter of health or a distributor of disease is very great, and, strange to say, its control is still too large a problem for Gotham to solve. For, says the commissioner, "Over 65,000 persons deal in milk in this city, and there are only five inspectors for the whole State." Moreover, "at present the State Board of Health has an insignificant sum of money at its disposal with which to pay salaries and reimburse owners of cattle when these are slaughtered to prevent the spread of disease." Nevertheless the "Health Department has made 72,036 inspections of milk during the year, has investigated 106 complaints from citizens, has arrested 408 persons for selling impure milk, and has been the means of collecting over \$12,000 in fines from those brought to trial."

Dr. Edward W. Martin described some of the methods employed for preventing the sale of adulterated milk in the city. When the inspector discovered by the lactometer that a sample of milk fell below

the standard of purity, he made careful notes of his observations, and prepared two sealed samples, one of which was sent to the department chemist, and the other to the dealer, who might have it analyzed independently of the Board of Health. About ninety-nine per cent of all the adulterations of milk investigated proved to be either the addition of water or the removal of cream. That this sort of work is profitable is shown by the persistency of dealers in reducing the standard of their output in spite of arrests and fines. One dealer, for instance, who had been in the business just six years, and who during that time had been arrested six times and made to pay fines aggregating one thousand dollars, was still selling milk.

Dr. Ernest J. Lederle spoke of the methods employed in the chemical analysis of milk. Certain precautions must be taken or a fair sample of milk can not be obtained for analysis. The milk must not be acid or casein will separate. It must not have been churned, either in the dairy churn or by shaking up in the delivery wagon, or the fat globules will be separated from the specimen, and thus the sample will not fairly represent the milk from which it is taken.

The speaker said that the law requiring that milk shall contain from three and a half to four per cent of butter fat is a direct invitation to adulteration. The law should require the full amount, viz., four per cent.

Dr. Rowland G. Freeman then read a short paper on the Significance of Micro-Organisms in Milk.

"He said that the non-pathogenic micro-organisms were for the most part derived from the dust of the building in which the milk is handled, from the dirt on the cow, etc. It was not improbable that some of these micro-organisms now classed as non-pathogenic were concerned in the production of diarrhea in children, and they certainly caused souring of the milk; but it was most important to remember that the same loose dairy methods that were responsible for the introduction of the non-pathogenic bacteria were also the cause of the contamination of the milk with the pathogenic forms. These micro-organisms could be detected by staining, by culture, by inoculation into animals, and also by their disastrous effects on the consumers. Undoubtedly many epidemics of typhoid fever, diph-

its use, in connection with wise legislation, we might hope in the future for a better milk supply."

These facts are most significant and can not be disregarded by any clear-eyed sanitarian. In view of such statements it is not too much to say that milk plays a bigger rôle in the distribution and determination of disease than perhaps any other factor in common life, and is therefore more of a menace to public health than bad water, bad drainage, and badly constructed and badly regulated dwellings.

It should be the rule of all households to *boil all milk* which is to be consumed by its members unless the sources of the milk supply are known to be above suspicion.

Dr. Henry M. Coit, of Newark, N. J., the originator of the plan of "certifying milk," gave a short account of how he had come to establish this practice, and what results had been secured.

"After describing the obstacles he had to encounter during two years of effort to secure a better milk supply for cities, he said that it had finally occurred to him that by interesting the medical profession the matter might be taken into their own hands. With a committee of seven or eight representative physicians in Essex County the work had been begun, and after considerable search they had found a dairyman who lived up to the terms of a very stringent contract. Under this contract several experts were employed by the committee and paid by the dairyman, and when they were satisfied that the provisions of the contract were fulfilled they were empowered to certify to the character of the milk supply. The physicians on the committee were not allowed to have any financial interest in the work. The dairyman who had met with the approval had found in the course of the two years in which this plan had been tried that his daily output of milk had increased from 800 quarts to over 2,000 quarts, so that the system could be considered a commercial success. It had also been the means of stimulating neighboring dairymen to increased efforts to improve their product. By proper supervision at the dairy it had been possible to secure a milk of uniform nutritive value, and other important information regarding the effect of different feeding of the cows on the quality of the milk had been secured."

If this plan can be successfully carried out in the cities it will entitle its originator to high rank as a benefactor of his race. Certainly a certificate of purity from a board of sanitary experts would be a blessing inestimable to the consumer, and to make the sale of pure standard milk more profitable than dealings in the manipulated and inferior article is to untie the gordian knot of the whole tangle of dishonesty and adulteration.

THE HEALTH OFFICER AND OFFICE.

In the issue preceding this is a letter from Dr. W. P. White, Health Officer of Louisville, presenting his annual report, with appropriate comments, and the full text of an ordinance "To Prevent the Spreading of Infectious and Contagious Diseases" in the city.

The report shows that great progress has been made in the sanitary affairs of the city since Dr. White took charge of the Health Office, and is a flattering testimonial to the energy, zeal, and executive ability of this accomplished gentleman.

Dr. White has been identified with the Health Department of the city for nearly a quarter of a century, and during that time has given sanitary science and its application to the city's needs his earnest study and best thought. Therefore, when called to the Health Office on the death of Dr. H. W. Galt, in 1893, he came fully equipped for the important work before him, and with rare ability to make practical application of his knowledge as the results show.

And here are some of the things which stand to his credit: The enactment and enforcement of ordinances for the inspection of live stock; protection against infectious and contagious diseases; proper sewer connections; thorough cleansing of the reservoirs of the city's water supply, and initiatory measures providing for the filtering of this water; milk inspection; a general sanitary nuisance ordinance, and many improvements in the organization of the Health Department; the securing and preservation of valuable records, statistics, etc. In short, during the brief incumbency of Dr. White (about two years), the Health Office, which was little more than a repository for mortuary records, has been transformed into a living, working department in the city's most vital affairs.

The benefits accruing from a well-regulated health department can not be stated in commercial terms, although without health there can be no wealth. They are more than houses and lands, they are better than gold and gilt-edged securities, they are no less than the health and the happiness of the people. And no health department can be effective which has not as its executive a strong, brave, energetic, conscientious, clear-headed, accomplished physician and sanitarian.

Such Dr. White has proved himself to be, and being such he should be continued in office regardless of party policy or political overturnings.

Notes and Queries.

GERMAN ENTERPRISE IN THE FIELD OF CHEMISTRY.—The London Telegraph calls attention in the following language to the work which is being done by the great German chemical establishments :

“ ‘Made in Germany’ is now the recognized trade-mark for chemicals throughout the world. The dyes and by-products derived from coal tar have become a classical instance, or, as Bacon would have said, a glaring example. As we have stated, the fatherlanders have captured these trades from us. Go to Elberfeld, and what do we see? At the *Farbenfabriken*, besides first-class works, we are shown a laboratory unsurpassed, perhaps not equaled, in London, and employed in research or in the business there are sixty high-class chemists. In the *Badische anilin und soda-fabrik* seventy-eight chemists are engaged. An expert witness told the Gresham commission that six skilled chemists was the maximum number employed in any English color-works, if indeed, there are so many. These men are unceasingly active in research. The price to pay for progress is eternal vigilance. Every hint from England, France, America or Italy is tried; every new material tested; every hopeful process patented. The great works at *Hochst* made in 1890 from 1,700 to 1,800 colors, they employed 3,000 hands, 70 chemists, and 12 engineers. A firm in *Offenbach* with 300 workers had 45 investigators. The lesson that has been driven home in the fatherland is that industrial processes carried on upon a large scale give great chances for discovery. Just as gas-making gave anilin so the soap-boilers’ lye yielded iodine, the waste of salt gardens bromine, the mother liquors from the springs cesium and rubidium, the acid chambers selenium and thallium, the mines and metallurgical works gallium and germanium. Therefore, the ‘chemiker’ on the other side of the Rhine, is always looking out for something new. He found it in the benzidine and azo dyes, the former giving Congo red and chrysamine, ‘the most important discovery of modern times so far as cotton dyeing is concerned.’ In short, as Dr. Ostwald has said, it is now a firm article of belief that ‘the secret of German industrial chemistry is the recognition that science is the best practice.’ In England it is to be feared there still lingers faith in ‘the rule of thumb.’ ”

STIMULANTS FOR ATHLETES.—The alert mind of the modern drug manufacturer has not failed to take note of the extraordinary interest and widespread indulgence in athletics and sports of every kind. The bicycle, field and track athletics, foot-ball, golf—all these things have increased enormously the number of contests in which the person who has the greatest physical vigor and endurance wins. It has occurred naturally to

the pharmacist, therefore, that some substance which would make the competitor in athletic sports keep his wind and his strength a little longer would be eagerly seized upon. We hear already of bicyclists who use various coca and kola compounds in order to help them in their work. It is even rumored that preparations of cocaine are consumed to some extent. We feel sure that all true athletes would disdain any such injurious and adventitious aids, but there is a vast number of persons who take such things thoughtlessly and injury is done thereby. The announcements which are made in advertisements of various stimulants, in which it is claimed that they save the strength and promote the endurance of bicyclers and athletes generally, are very much to be deprecated. There are no drugs which will help one to win a game that could not be won without them, and the general effect of drug-taking, and especially of the use of drugs belonging to the caffein and cocaine class, is distinctly bad. We believe that the medical profession ought seriously to warn those with whom they come in contact professionally against the use of such things.—*Medical Record.*

EASY EXPOSURE OF OCCULTISM.—There is an organization in Boston known as the Society of Psychical Research. The other evening, at one of the meetings, a certain person, said to possess remarkable occult powers, volunteered to give an exhibition, which offer was gladly accepted by the society. The "professor" was a woman, slightly built, with pallid cheeks and dark raven hair. One of the members, while not particularly skeptical, thought he would try a little experiment on his own account, so before going to the meeting he provided himself with some pieces of phosphorescent paper, that in the dark lit up like a glow-worm. This he tore into small pieces, and, just before the lights were extinguished, contrived to place three or four bits of the paper on the "professor's" head. Then he sat down and waited. When the room was dark the "professor's" cranium emitted a pale light, visible to every one in the room but the "professor" herself. In a few minutes the phenomena began, but, strange to relate, when a tambourine in one corner of the room began to sound, the illumination was there also, and the moving about of the operator could be easily traced. The suppressed mirth told the "professor" something was wrong, and when the light was turned on and the paper discovered, the remarks made were far from spiritual. There were no more manifestations that night.—*Medical Record.*

SYPHILIS THROUGH FLEA-BITE.—Jonathan Hutchinson, in a late number of his unique and valuable Archives of Surgery, reports a primary lesion of most unusual origin.

An elderly member of the profession presented himself covered with an evidently syphilitic eruption, which rapidly disappeared under the use of mercury.

The only interest about the case was the question as to how the disease

had been acquired. The doctor was evidently anxious to give all the information in his power, but was positive that he had never been exposed to any sexual risk, and, as he had retired from practice, no possibility of infection in that manner existed. He willingly stripped, and a careful examination of his entire surface revealed no trace of lesion whatever on the genitals, or at any point, except a dusky spot on one leg, which looked like the remains of a boil. This the doctor stated had been due to a small sore, the dates of the appearance and duration of which were found to fit exactly with those of a primary lesion. There had also been some enlargement of the femoral glands. He had never thought of the sore in this connection, but remembered most distinctly that it followed a flea-bite in an omnibus, and had been caused, as he supposed, by his scratching the place, though he could not understand why it lasted so long.

Mr. Hutchinson concludes that all the evidence tends to show that the disease had probably been communicated from the blood of an infected person through the bite of the insect. It thus appears that even the proverbially trivial flea-bite may prove a serious injury at times.—*Medical News.*

AN AMERICAN PARABLE OF THE BLACKSMITH AND THE PHYSICIAN.—Under this heading the Indian Medical Record says: "A certain man was hanged, and he died, and he left two sons, honest men. Now, one of these was a blacksmith, but the other became a physician. And after their father had been taken from them these brothers made their homes in other lands. And the blacksmith would have prospered, but it befell that some one asked him how his father died. And the blacksmith, looking angrily upon him, answered: 'He was hung.' For the blacksmith was an honest man. Howbeit presently, when a horse was missing, men gathered and seized and hanged the blacksmith, saying: 'This man must take after his father.' So the blacksmith did *take* after his father. And at the same time, in his own city, one inquired of the physician by what means his father died. And the physician covered his face and wept. But while he wept, he considered, saying to himself: 'If I say he was hanged, then I shall shock this man and give him pain. Nevertheless I must tell the truth.' He said, therefore, 'My father died of heart failure.' And again he wept, the questioner weeping with him. Then this being told, men said: 'Doubtless, since his father died of heart failure this good physician and loving son hath made a study of kindred diseases.' So they resorted unto him. And the physician became a specialist, and he looked at them who came in and coughed once and sneezed twice, and demanded \$100. And they gave gladly. For the physician was an honest man."—*New York Medical Journal.*

PHOTOGRAPHY AS AN AID TO DEAF-MUTES.—The *Wiener medizinische Blätter* for December 26th announces that Dr. Gutzman has succeeded in photographing articulate speech, so to speak, that is to say, the movements of the

lower jaw and the soft parts, in a way calculated to be useful to deaf-mutes. He has found it best to take side views. It seems that the lower jaw moves downward in the enunciation of *a* (our *ah* ?), forward in that of *s* (whether initial, equivalent to our *z*, or terminal, our hard *s*, is not stated,) and *sch* (our *sh*), backward in that of *f*, *w* (our *v*), and *v* (our *f*), and upward in that of *d*, *t*, and *n*. The lips and cheeks move forward in the articulation of *o* and *u* (our *oo*), and backward in that of *e* (our long *a*) and *i* (our long *e*). The floor of the mouth, so far as its behavior is visible in the soft parts beneath the lower jaw, moves downward in the articulation of *l* and upward in that of *k* and *g*. By means of eighteen types based on these movements Gutzman has been able to represent a succession of words. It is stated that by arranging these types properly in a stroboscope one may easily recognize the words they represent. Such a device, it is thought, will prove of material aid to the deaf and dumb in learning to understand spoken words by watching the speaker's articulation. This is said to be much easier when the speaker is viewed from the side than when he is observed face to face. *New York Medical Journal*.

GRIEF FROM A MEDICAL STANDPOINT.—The nervous system requires complete rest after blows caused by sorrow. Recent medical observations show that the physical results of depressing emotions are similar to those caused by bodily accidents, fatigue, chill, partial starvation, and loss of blood. Birds, moles, and dogs, which apparently died in consequence of capture, and from conditions that correspond in human beings to acute nostalgia and "broken heart," were examined after death as to the condition of their internal organs, and it was found that the nutrition of the tissues had been interfered with, and the substance proper of various vital organs had undergone the same kind of degeneration as that brought about by phosphorus or the germs of infectious disease. The poison of grief is more than a man. To urge work, study, travel, the vain search for amusements, is both useless and dangerous. For a time the whole organism is overthrown, and temporary seclusion is imperative for proper readjustment. Grief can not be ignored, neither can it be cheered up. It must be accepted and allowed to wear itself away. Readjustment comes slowly. Sorrow, grief, and all great misfortunes should be regarded as conditions similar to acute infectious diseases, which they resemble in result; and, later, as convalescence from such diseases. Seclusion, rest, sleep, appropriate food, fresh air, sunshine, interests that tax neither mind nor body, these are requirements in this class of illness.—*Charlotte Medical Journal*.

THE WORLD'S CONGRESS OF MEDICO-CLIMATOLOGY will hold a national

regard to their therapeutic value in all forms of disease; also of examining into the merits of mineral waters and properly classifying them. This work is to be done under the auspices and direction of the medical profession through regularly organized societies acting in co-operation with the congress. A national meeting will be held every year and an international meeting every five years. A printed copy of the constitution and by-laws, with other matter relating to the congress, may be had upon application to the secretary, Dr. W. S. Rowley, Menger Hotel, San Antonio, Texas.—*New York Medical Journal.*

DR. BILLINGS CHOSEN LIBRARIAN OF THE NEW YORK PUBLIC LIBRARY.—Dr. John Shaw Billings, head of the Department of Hygiene in the University of Pennsylvania, has been selected by the trustees of the New York Public Library as Superintendent-in-Chief of the consolidated libraries, consisting at present of the Lenox, Astor, and Tilden libraries. He has accepted the position, provided the trustees of the University of Pennsylvania consented to his resignation from their institution; and it is understood that this consent has now been given, though perhaps not yet officially.

THE MEDICAL PROFESSION IN RUSSIA.—Russia has 15,740 qualified doctors, 310 of whom do not practice, giving one doctor to 8,000 persons throughout the empire. As by far the greater number of the doctors live in the cities, and the urban population of Russia is only fourteen per cent of the whole, the peasants are poorly provided with medical assistance. One fifth of the total number of doctors are in the army or navy, and five hundred and fifty-three are women.

FAILURE OF THE OREGON MEDICAL LAW.—According to the Medical Sentinel the recently enacted law regulating the practice of medicine in Oregon seems likely to prove ineffective. It is stated that a Chinaman, who was practicing without license in Portland, was arrested and tried three times before he could be convicted, and then only had to pay a fine of \$50. Another irregular practitioner was tried and acquitted.

THE WILL OF PASTEUR.—This is my testament. I leave to my wife all that the law allows me. May my children never forsake the path of duty, and always cherish for their mother the tenderness she so richly deserves.

L. PASTEUR.

MR. TULKINGHORN: There is a very fine picture of our minister in to-day's paper. MRS. TULKINGHORN: Indeed! What has he been cured of?
Boston News.

PROF. VIRCHOW.—It is announced that Prof. Rudolf Virchow has been made a commander of the French Legion of Honor.

Special Notices.

RENAL DISEASE.—Have practiced medicine thirty years, and during that time I have constantly suffered from disease of the kidney, passing calculi. When I procured a bottle of Sanmetto I had been down over two months. I took two teaspoonfuls four times a day. It promptly relieved me. I think Sanmetto is the finest remedy that has ever been produced for diseases of the genito-urinary organs. Were it necessary I would give the full history of my case. Sanmetto surely can never be improved upon. In my long run of practice I have used hundreds of remedies for such cases, but none equal to Sanmetto. J. C. SCOTT, M. D., Waynesville, Ill.

SENNINE, THE NEW AMERICAN ANTISEPTIC.—This product is composed of boracic acid and phenol, and is unexcelled as a dry antiseptic dressing. The only perfect substitute for iodoform, carbolic acid, bichloride of mercury, etc. It is entirely odorless, consequently preferable, and is very highly recommended by the most prominent surgeons.

SANMETTO.—I have been using Sanmetto for several years, and find it invaluable in nearly all kidney and bladder troubles, especially those accompanied by irritation or inflammation of the mucous membranes, as well as in sexual decay and pre-senility.

WILLIAM F. MITCHELL, M. D., Addison, Pa.

F. E. HARRISON, M. D., Abbeville, S. C., says: I have used Celerina in appropriate cases, and can heartily recommend it to all who wish an elegant preparation, combined with undiminished therapeutic activity. It is peculiarly fitted to such cases as delirium tremens, headache from debauch, or excessive mental or physical exertion.

CHRONIC DRY NASAL CATARRH.—The following prescription is recommended by one who has successfully tried it for chronic dry nasal catarrh: 1 ounce liquid vaseline; $\frac{3}{4}$ ounce Sanmetto; $\frac{1}{4}$ ounce glycerine. To be used as a spray three times daily through an atomizer, and to take internally Sanmetto in teaspoonful doses four times a day.

LABOR SAVING: The American Medical Publishers' Association is prepared to furnish carefully revised lists, set by the Mergenthaler Linotype Machine, as follows:

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THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXI.

LOUISVILLE, KY., FEBRUARY 8, 1896.

No. 3.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

COLORADO AS A HEALTH RESORT.*

BY WILLIAM BAILEY, M. D.

Professor of Materia Medica, Therapeutics, and Public Hygiene, University of Louisville.

I want to ask your indulgence from the fact that I have no essay, but desire to talk a little about Colorado, and Colorado as a health resort, which has been brought more particularly to my attention by a recent visit.

A party of eight of us left Louisville for Denver to attend the meeting of the American Public Health Association in that city. The meeting was one of considerable interest, not a very large one because of the distance, about one hundred and twenty-five registering. Many papers of interest were read and discussed before the body. One of the most interesting of all was a paper by a physician of the City of Mexico, claiming that he immunized people against yellow fever by the hypodermic injection of the urine of yellow-fever patients. In the thousands of injections which he has made in only one abscess occurred as the result of the injection. He is very confident, indeed, that the urine of yellow-fever patients possesses something that makes people immune to yellow fever; whether or not it is after the order of serum therapeutics, and that the antitoxin of yellow fever is in the urine, I do not know.

thousand inhabitants outside of the city of Denver, its capital, with a population of about one hundred and fifty thousand, one of the most beautiful cities in the country. They have suffered in Colorado for the last three years by the depressed state of their silver interests. Since the tumble in silver their attention has been directed more particularly to gold, and the output of Colorado for the present year will probably be twenty millions, while ten years ago it was only ten millions. It is now second to California as a gold-producing State.

The discoveries recently made have been many and rich, and in the Cripple Creek region fortunes have been made with astonishing rapidity. We have, for instance, a former citizen of Jeffersonville, Ind., who was five years ago an indifferent carpenter, who now takes from his mines fifty thousand dollars a week. This is one example of success in the Cripple Creek district. I believe that Colorado will rival California in the output of gold in less than five years.

The Kentucky delegation was on top in Denver, and we had every thing we wished for.

After adjournment of the Association we had an excursion to the Platte River canyon to inspect the water supply of Denver and the plant for filtration. Since this plant has been in use the mortality in Denver has been lessened fifty per cent.

After this trip was over many of us wanted to see more of the country. Dr. Mathews and his wife, and Dr. Rodman went directly to Manitou Springs, where the celebrated Manitou spring is. We were given an excursion to Colorado Springs and handsomely entertained by the people and doctors, being treated to a ride through the celebrated Garden of the Gods. After this, about twenty-five of us concluded to go still further west than this. We took a train on the Denver & Rio Grande road, going to Pueblo, where we were treated handsomely by the citizens, then passed on our way to the Arkansas River canyon. In this there is perhaps as magnificent engineering as can be found in the country. Particularly I would mention the Royal Gorge. Dr. Weidner in passing through this could only look half way up, and then rest and look the other half. At this point the canyon is not over thirty yards wide, the river filling absolutely the entire canyon.

We passed on through the Royal Gorge and at about supper time reached Leadville. Leadville is a little over ten thousand feet above the sea. About twenty of the party decided to stop over night in order to enjoy the scenery. Many suffered inconvenience from this

altitude, and I do not think any of the party enjoyed themselves particularly well. Not wishing to sleep at that elevation, I had gone on and reached what I am sure is the ideal place in Colorado as a pleasure resort, if not as a health resort; that is, going on over the divide three or four hours beyond Leadville, we reached Glenwood Springs. Glenwood Springs was to me the ideal place of Colorado. It has hotels and improvements that have cost, perhaps, a million dollars—a hotel that would be a credit in its appointments and keeping to any city in this country. Particularly I wish to mention what is found in the way of a bathing pool—a brown stone bath-house and pool costing about three hundred thousand dollars. This pool is supplied by a spring that is exceedingly saline and the water is at a temperature of 120° F. You bathe in the open in an immense pool that is covered on the bottom with tile and absolutely clean. This pool is emptied once or twice a week and the floor swept clean. It varies in depth from three feet in one end to five and one half or six feet in the other, and so clean that it is absolutely a pleasure to bathe in such a place. They continue bathing here even in midwinter, the vapor from the pool being such that you are not uncomfortable, although snow may be falling around you. The dimensions of this pool are worth mentioning. It is 110 feet wide and over 700 feet long. Think of swimming in a pool of salt water three to six feet deep and kept at a temperature of 100°, and of these dimensions. It is the largest warm water swimming pool in the world.

We returned from Glenwood Springs by another route, seeing some marvelous scenery and wonderful engineering in the way of railroads. These roads run over the mountains with a grade that we would call impracticable. They run at a speed of twenty-five or thirty miles an hour with a grade of one hundred and twenty-five feet to the mile. I will not take your time in mentioning the engineering through these canyons; it is simply marvelous.

I would like to mention the visit to Pike's Peak. Pike's Peak is a little over fourteen thousand feet high, and the trip is made from Manitou, at its base, by a railroad eight or nine miles long. The climb is made by means of a cog-wheel in the center of the track, and they simply crawl up by means of the cog. We found much of the route covered with snow, part of which had to be shoveled off before we could reach the summit. This elevation was a great discomfort to nearly everybody on the trip, and very few of us could take any amount of exercise or breathe with any degree of comfort. The

frequency of respiration was greatly increased and the pulse beat over one hundred.

I want to speak more particularly of the impression Colorado made upon us as a health resort. The climate I would mention as being for much of the year exceptionally good; the atmosphere is so clear that Pike's Peak is seen from Denver most of the time, although it is seventy-five miles away. What are the things desirable in a climate? Of course there is very much in climatology that we do not understand. We do not understand the effects altogether of elevation; we do not know as to the humidity; we do not know as to the electrical conditions. I will say this in regard to Colorado, that it is a climate in which the patient can spend more of his days comfortably out of doors than any climate I know of. They have little rainfall, and the atmosphere is very dry. The soil is such that the snows do not remain any length of time. Even in winter an hour after a rain you can walk anywhere without soiling your feet. The points that I would make in favor of Colorado are, its elevation, the absence of moisture, the absence of storms and winds. The motion of the atmosphere is very much below the average of most places in this country. It is claimed, and I believe demonstrated, that the first effect of this elevation is to increase rapidly and largely the number of red blood corpuscles and the proportion of hemoglobin. The increased depth and frequency of the respirations, giving, as it were, gymnastics to a diseased or crippled lung, make it, it seems to me, an ideal place for incipient phthisis. And it is for these cases that Colorado stands unrivaled. It is stated that one half of the physicians in Denver are men who have gone to Colorado because they had incipient phthisis. The majority of them have been relieved, and having found perfect health have made it their home. Dr. Rodman could tell you of a physician in Manitou who was the subject of chronic malaria with an enlarged liver. He had traveled extensively, but had found relief nowhere until he went there. He left Manitou, but his malaria returned. He is now in Manitou enjoying perfect health.

People far advanced in phthisis do not do well in Colorado. The comforts of a home and the care of friends can not be found here as elsewhere, and the lack of these things weighs seriously against the person who is far advanced in phthisis, and many mistakes of this kind have been made. The best equipped hotel in Colorado Springs is said to have averaged ten deaths to every room in the house, composed chiefly of men and women who have gone to Colorado

when it was too late. The almost universal expression is that people in the early stages of consumption get well in Colorado. The air is remarkably free from bacteria of all kinds. The increase of red blood corpuscles is a factor of much importance in the treatment of these cases, and it is I think, as they claim, largely due to the elevation. The increase in the color of the skin of these anemic people is remarkable in one month's time after they have reached Colorado. The absence of moisture I think is particularly favorable, in that it enables patients to spend much of their time out of doors. Over three hundred of the three hundred and sixty-five days of the year can be spent out of doors, and they can sit out of doors even in the winter time. The difference of temperature of day and night is considerable. You sleep under blankets at all times, and the sleep is said to be delightful. I think possibly for a few months in the winter time further south, say in New Mexico, a better climate can be found, but during the rest of the year the climate would be preferable further north than New Mexico and a little cooler. They have no extremes of temperature, the thermometer seldom going above 90° in the summer and seldom below freezing in the winter. Many people camp out in tents in the open and much good comes of this method of living.

Colorado made an impression upon me that I shall not forget, and I would confidently urge people who are subjects of incipient phthisis to avail themselves of the advantages and benefits of Colorado.

LOUISVILLE.

A CASE OF OSTEO-CHONDROMA AND NON-UNION OF THE INFERIOR MAXILLA OF SEVEN YEARS' STANDING, WITH RECURRENT GROWTH: OPERATION.*

BY R. Y. HENLEY, D. D. S.

Late Professor of Oral Surgery, Dental Department Southern Medical College, Atlanta,

AND J. A. STUCKY, M. D.

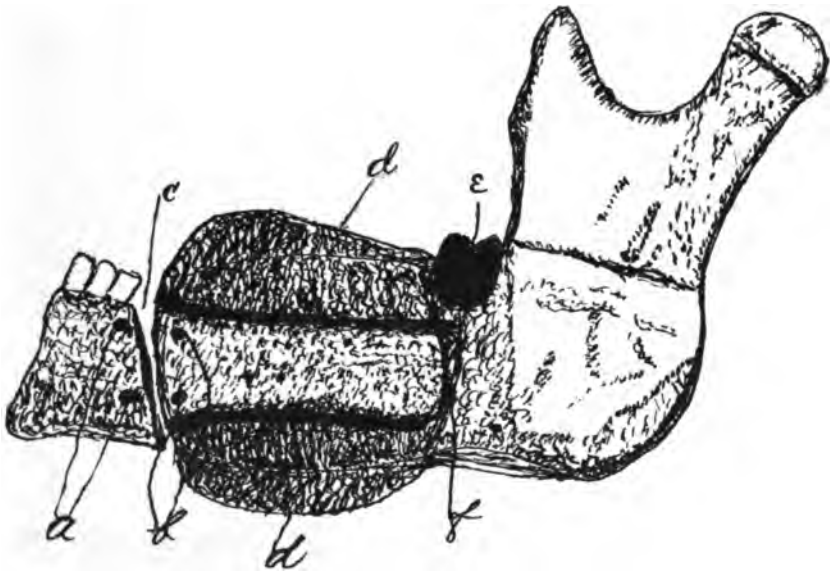
During the latter part of October, 1895, Dr. Allen, of this city, brought to me a case which proved to be a most interesting one. The patient, a colored woman, aged twenty-seven years, and in apparently good health, gave the following history of her case:

When a child, ten or twelve years of age, she was kicked by a horse on the left side of the face, and, although she suffered from the bruise inflicted, there was no fracture resulting. In about a month or six

*Read before the Lexington and Fayette County Medical Society. The two operations were made at the Protestant Infirmary at Lexington, Ky.

weeks she noticed a slight enlargement on the outer plate of the inferior maxilla of the left side, back of the mental foramen, and near the base of the bone. This growth continued to enlarge, and when at the age of twenty years it had attained the size of a walnut. A physician, whose care she came under at that time, advised an operation, to which the patient consented.

All the teeth in the inferior maxilla, from the canine to the second molar inclusive, on the left side were extracted, and a V-shaped section was made through both plates of the bone at the point of location of the canine tooth, and a part of the tumor removed.



a Points at which the holes were drilled in anterior piece of maxilla with dental engine, and through which silver wires were passed and carried through openings (*b*) in posterior loose piece to draw the ends of bone together for the purpose of bringing about union. *b* Points at which holes were drilled in posterior loose piece of bone. *c* Point of non-union of bone. *d d* Location and appearance of tumor prior to first operation. *e* Third molar. *f* Posterior part of tumor where outer plate of bone was forced out at almost at a right angle and point from which it was removed in first operation.

When the patient was brought to me, seven years after this operation, I found an endosteal tumor about the size of a hen's egg, which had spread the plates of the bone to a considerable extent. In addition to the above described condition the non-union of seven years' standing confronted me, with atrophy of the digastric, external pterygoid, and masseter muscles.

I advised an operation for the dual purpose of removing the tumor, which proved to be an osteo-chondroma, and to bring about union of

the bone. The plastic operation consisted of an incision through the lower lip and the soft parts at the symphysis to the base of the bone, thence along the base almost to the angle of the jaw, and the flap dissected back, which was done by Dr. J. A. Stucky, who assisted in the operation. I then cut away the outer plate of the bone by means of a circular saw in the dental engine and the use of bone forceps, after which the curette was used to remove the tumor left between the plates, scraping it away until the inner plate was reached, which appeared to be in a healthy condition. After removing the tumor I pared away the periosteum on the ends of the two pieces of bone at the point of non-union, and drilling, with the dental engine, two holes through each of the pieces of bone, drew the ends together by means of silver wires to bring about union. The operation, which was made on the 22d day of December, being completed, the wound was packed with iodoform gauze, the flap brought into position and held by sutures of silkworm gut, with antiseptic dressing secured by adhesive strips and a bandage. The general condition of the patient after the operation was good; her temperature fluctuating from 97.2° to 100.6° ; respiration normal, and pulse varying from 80 to 136.

On the fifth day the packing was removed, wound dressed, and patient continued to do well for two weeks. At the end of the second week a recurrent growth appeared, showing itself first along the alveolar border of the inner plate of the bone, and growing rapidly, forcing the tongue to one side and interfering with deglutition, phonation, and closure of the mouth to a marked degree. This recurrent growth proved to be an osteo-sarcoma of a chondromatous nature, and necessitated a second operation, which was made on the 19th day of January.

The nature of the disease necessitated the removal of the bone from the original point of non-union to the temporo-maxillary articulation, which was done by Dr. J. A. Stucky. The growth in the soft tissues under the tongue was transfixed and ligated below the point of induration, or line of demarkation, and cut away. A ligature was passed through the tongue to hold it out of the way during the operation.

Notwithstanding the number of arteries cut, the patient lost a very small quantity of blood. This wound, like the first, was antiseptically dressed. In dissection away the flap for this second operation we found that the expiration of the third week complete union had taken place at the point where non-union had existed previous to the first

Thus far the patient has improved steadily and rapidly, with no indication, as far as we can see, of a recurrence of the trouble.

REMARKS BY DR. J. A. STUCKY.

The second operation, which consisted of removing the diseased half of the bone (inferior maxilla) entirely, was performed after the method described by Erichsen. I first ran a very strong silk ligature through the tongue so as to control it perfectly when the soft tissues were divided in the mouth. This proved to be a very helpful, if not an absolutely necessary thing to do, as subsequent symptoms proved. As soon as the muscles and recurrent growth were removed the tendency of the tongue was to fall back into the lower pharynx, thus not only interfering with respiration, but carrying a great deal of blood into a dangerous locality. By the aid of the thread the tongue could be easily kept in proper position, or pulled out so as to make easy and thorough use of sponges.

After treating the tongue the incision was made through the soft parts just over symphysis, carefully avoiding the lower lip, and extended in semi-lunar shape well up to the articulation. Vessels were ligated as they were cut, and notwithstanding the vascularity of the parts much less blood was lost than I anticipated. I noticed three things which are worthy of mention.

1. I was surprised at the amount of bony union that had taken place at the point where the disarticulated ends were wired. After removing the wire sutures I had to use considerable force with a large periosteal retractor in order to separate the bone, and to all appearance the union and callus were firm and healthy.

2. The ease with which the periosteum from this point (suturing point) was separated from the bone; this seemed to be infiltrated with the disease, was thick and spongy, and had to be dissected and curetted from adjacent soft parts. When the bone was freed of attachments of soft tissues it was grasped with the left hand, depressed and rotated outward, and disarticulation completed. The growth under the tongue was ligated before being amputated. Iodoform gauze was packed lightly in the wound and the incision closed with worm gut sutures, and patient put to bed in good condition.

3. In twenty-four hours after the operation breathing became very labored, lips purple, facial expression anxious, and symptoms of laryngeal obstruction were so marked that I thought a tracheotomy would

have to be done. She complained of intense pain in the throat, and the great secretion of saliva and mucus was a source of constant irritation and discomfort, as it was impossible for her to expectorate, and the fluid flowed constantly from the mouth. Patient was placed in a sitting position, properly supported, $\frac{1}{4}$ grain morph. and $\frac{1}{16}$ grain strychniæ were given hypodermically. The mouth and pharynx were sprayed with one-per-cent solution of cocaine and two-per-cent solution antipyrine (combined) every hour or two. The sitting posture, aided by morphia, relieved the difficult breathing, the spray soothed pain and sense of choking in throat, and lessened the flow from the mouth. In twenty-two hours she was able to lie down with comfort. The mouth could not be opened sufficiently to allow of a thorough examination.

I suppose the cause of the obstruction to respiration was largely due to mechanical closure of the larynx as a result of cutting the pterygo-pharyngeus muscle (chiefly), aggravated by injury done to the nerve supply of the parts.

The tongue was swollen some from irritation of the ligature, but not enough to cause the amount of obstruction to respiration which was present.

On the eighth day I removed the gauze packing; there was little suppuration and every evidence of healthy union.

LEXINGTON, KY.

SPONTANEOUS STRAIGHTENING OF RICKETY CURVATURES OF THE LEG.—Kampe (*Bruns' Beitr. z. klin. Chir.* xvi. 1), using the material of the Tübingen Clinic, concludes that (1) the greater number of all cases undergo spontaneous cure. Of the author's, all severe, 75 per cent were cured, 15.3 per cent improved, and only 9.7 per cent remained *in statu quo*. (2) The process of spontaneous straightening lasts usually two to four years. If the curvatures begin in the first or second year of life the legs are quite straight by the fourth or fifth. (3) If the curvatures are unchanged by the sixth year spontaneous cure does not take place at all. There are always cases of most severe general rachitis. (4) The chief aim in treatment is to improve the general health so as to strengthen the muscles. In Kampe's experience, as soon as the disease is past the acute stage, being about on the legs is not detrimental, but, on the contrary, helps the cure. Orthopedic treatment by plaster-of-paris splints, etc., is not necessary. Osteotomy is indicated only when the curvatures persist after the sixth year.—*British Medical Journal*.

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, December 15, 1895, Dr. W. L. Rodman, President, in the chair.

In lieu of the essay Dr. William Bailey recounted, *extempore*, some reminiscences of the recent meeting of the American Public Health Association, which met at Denver, Colorado, the subject of his remarks being Colorado as a Health Resort. [See page 81.]

Discussion. Dr. F. C. Wilson: When Dr. Bailey mentioned that such a large number of patients had died in one of the hotels in Colorado Springs, the question occurred to me, were any steps taken to disinfect these rooms that had been the scene of so many deaths, and whether any observations had been made upon the vitality of the bacillus in those surroundings as compared with this climate.

One of the chief advantages to be obtained by residence in these high altitudes is the enforced expansion of the chest. If a person is required to breathe an atmosphere at six thousand feet above the level of the sea, he must take in two or three times as much air as at the sea level. This causes expansion of the involved air-cells, and of course increases the vitality of the lung tissue, giving it better resisting power, and it would be to that extent better able to resist the encroachments of the tubercle bacillus. The blood itself would circulate better in the lung and is better aerated. In this way we may be able to account for the improvement in the blood as frequently noticed.

Dr. J. A. Ouchterlony: I regret very much that I did not have the pleasure of hearing the whole of Dr. Bailey's remarks. What I did hear was exceedingly interesting and fully bears out the experience that in an indirect way I have had of the climate of Colorado. My attention was first called to it many years ago by a friend who has since passed away, and whom Dr. Bailey and I knew very well. He went to Colorado on account of asthma that he could not get relief from here. So long as he lived there he enjoyed perfect exemption from the disease. His son inherited a tendency to it, and as early as his twelfth

* Stenographically reported by Dr. Cashin

year he developed a severe form of asthma. So long as he lived in Colorado he enjoyed complete exemption from the disease. But, unfortunately for him, he returned to this State one summer, was seized with a severe paroxysm and died.

I have in past years sent patients with that disease to Denver, and every one has been greatly benefited, and most of them are well so long as they remain there. It is now many years since I began sending patients with tuberculosis to Colorado, and, as Dr. Bailey has said, if they are in the incipient stage of the disease they are benefited by a residence there; later on the reverse is true. I remember one patient who was sent there (not by me) and almost immediately upon reaching Denver, or some place in its vicinity, she was seized with a violent hemorrhage from which she died in a very few hours. This year I have sent two patients to Colorado. One was of a very unfortunate disposition that could not find comfort anywhere. She complained of the place, of the climate, of the hotels, and of every thing connected with Colorado. The other was a young man in a very early stage of tuberculosis. He made acquaintances of an undesirable character, took to dissipation and very speedily developed a pneumonia, and fell into a deplorable condition indeed, but rallied, and has since improved in a most satisfactory degree. I can remember a number of patients I have sent there who have obtained marked, and in some cases permanent relief. An old college friend of mine went through the war in the Confederate army and came out of it broken in health and fortune. He had several hemorrhages and then removed to Colorado. He lived there in good health and did active work for many years. He told me in 1886 that so long as he remained there he enjoyed good health, but so soon as he returned to a lower altitude he experienced a change for the worse.

Dr. J. G. Cecil: I was very much entertained by the description which Dr. Bailey has given us of Colorado as a health resort, and it was very instructive also. It is rather strange to me that people who go there are apparently cured after a time, and remain well only so long as they stay in Colorado. It seems to me that if climate is able to effect a cure the patient should be able to go away and live elsewhere with perfect immunity from the disease. I have been very much interested in observations made by physicians in North Carolina as to the effect of altitude on different classes of cases, and would like to know whether similar studies have been made by the physicians of Colorado.

Such observations would be of great help to those who are in the habit of sending patients to these places.

Dr. Joseph Mathews : It is very refreshing in a society like this to get away from the exhibits of pathological specimens and reports of the sick and hear something about health. We have all been very much entertained by the discussion of Dr. Bailey. There is one thing that, through modesty, Dr. Bailey has not called sufficient attention to, and that is the American Public Health Association, over whose deliberations he so ably presided. Ten of the leading physicians of Mexico traveled the enormous distance to Denver to attend this meeting, and there were representatives from Canada and every State in the Union. It is an association composed, not of physicians alone, but of men representing every branch of natural science. They have been going great distances to hold their annual meetings, but have decided in the future to go to the large interior cities, and will hold their next meeting in Buffalo.

As to Colorado as a health resort, Dr. Bailey has said every thing that is to be said much better than I could say it. I do not believe there is a better faculty in the United States than the four hundred physicians of Denver. Nearly all of them that I talked with were men who had left their homes in other parts of the country on account of having tuberculosis, and, finding benefit from the climate, have made their homes in Denver. If you speak to men in any occupation, they will tell you they went there because they were tuberculous, and that they are apparently cured.

There is one feature not mentioned, whether tuberculosis in other parts of the body is benefited to so great an extent as tuberculosis of the lung. I sent a patient to Colorado two years ago who was wonderfully benefited. He had a tuberculous condition of the rectum.

I would like to speak of another matter not exactly medical, but interesting to a body of physicians, viz., of Schlatter, the "healer." On the second day of my stay in Denver I was asked if I did not want to go and see him. I went, and found on the outskirts of the city between four and five thousand people, who had been standing in line for many hours, waiting for an opportunity to be spoken to by this man. He was in appearance a man about fifty years of age, with long hair, parted in the middle and falling down over his shoulders, with a strange and yet rather attractive face, dressed in a black silk shirt, jeans trousers, and heavy boots. He had the most peculiar eye I have ever

looked into. I was asked my impression after I left him, and I said that he had the eye of a madman. These people would approach him in line, each with a handkerchief in one hand. He would take the handkerchief, and holding the individual by the left hand and looking into space would recite a prayer. In the vast crowd of four thousand people there was not a word spoken above a whisper, and any one going into the assemblage would feel the same disposition to tread lightly and speak softly. There was no joking or hilarity by any one.

It may be asked, was any good done by this man? I remained there long enough to know that the people of Denver, at least, had stopped jeering at him as they had in the beginning. They saw that much was done by him and that people were apparently benefited. Having this phase of the matter presented to me I interviewed at least twenty of the people that had been blessed or treated by him. Among them was a lady of the city of Denver, and of some wealth. I asked her what her trouble was. She said that she had been confined to her house with a dropsical condition of the lower extremities. She received one treatment. The following morning the edema had disappeared and she had never had any trouble since. There was a man leaning against a fence and holding a pair of crutches. I asked him his trouble, and he said that he had had a paralytic seizure five years before. I asked him if he had been benefited. He looked at me contemptuously, and said, "I am nearly cured." I asked him how many treatments he had received; he said, "two."

The question arises in my mind, is this man crazy or are the people crazy? It is a question that is well worthy our attention. That he did do these things, it is true. The false story sent out by the press, that he was in collusion with the people who sold cheap cotton handkerchiefs, is fallacious. I saw him refuse presents, and it is said in Denver that he never receives a gift or fee of any kind. There were people present who had come five hundred miles to see him. I believe the man is crazy. I say this from his appearance and actions. Of his character I know nothing. They say his home life is lovable.

Dr. Bailey (closing the discussion): I think it is easily explained that advanced cases are made worse in Colorado, and that those which are incipient are made better. I referred to the increased work put upon the lung owing to the altitude and rarity of the atmosphere, but the condition of the lung is improved, and hemorrhages are less likely to occur. In cases more advanced hemorrhage is more likely to occur

than elsewhere. We should instruct our people to go to Colorado or other high altitudes, and, if they get relief, to remain there. There have been so many people going to Colorado that it is difficult to get something for them to do, and no one should go there without means for his support.

JOHN L. HOWARD, *Secretary.*

Abstracts and Selections.

INFANT CRIMINALS.—An inquest was held recently by Mr. Troutbeck on the body of an infant four months old, whose death was shown to have been caused by her little sister, three years old, who apparently from jealousy had stuffed the child's throat with paper. This must have been stuffed into the infant's pharynx with great force, as quite a large quantity was found lodged there when she was taken to Charing-cross Hospital. The child admitted that she had done it, and there seems to be very little doubt that she deliberately meant to get rid of an unwelcome rival. She had previously shown signs of jealousy, and had pinched the infant in a vindictive way, and shown her feelings so decidedly that the mother seems to have had some misgiving as to the safety of leaving the two children together. This early development of jealousy and spiteful conduct, and the expression of it in the form of deliberate murder by a child three years old, are fortunately rare. It is impossible from the facts adduced to say how far this may have been the outcome of a defective mental condition, and how far to absence of self-control traceable to faulty training or other circumstances of environment, but the case deserves to be pondered over by those who are responsible for the training and care of children. Much valuable work has been done by Baldwin, Preyer, and others on the physical and intellectual development of children, but their moral development is a field for research almost untilled. The development of the passions, the growth of self-control, and the way in which healthy development is modified or checked by environment or physical health are subjects on which accurate observations are needed. Further, in the case of children of tender years who, without regard for ulterior consequences, commit deeds that in older persons would be criminal, it is most important to know what will be the future developments of character. It certainly does not indicate the same amount of inherent criminal tendency when an infant performs or attempts murderous acts as when an older boy or girl, like the Plaistow lad, deliberately kills another person. What is wanted is careful observation of a large number of children over many years. With a little co-operation much might be done in orphan schools, where children are received at a tender age and remain for

some years. But a most fruitful field for investigation, the results of which would be of inestimable value to those who direct and organize education, is to be found in the ordinary private and public middle-class schools of the country. With the help of medical officers of the schools forms might be devised so that the parents might give the necessary information as to the early moral as well as mental development of the children. This could be entered in a register, and every term the development of the boy or girl under observation could be added, with any striking instances in which particular moral traits had been exhibited. By such collective investigation much may be learned, and we may be able to judge from characteristics shown by a child in what way he may tend to develop, so that his education and his surroundings may be suitably selected. This need has made itself felt in the scholastic profession. The College of Preceptors has recently instituted a training college for masters of middle-class schools, and has arranged that one of the courses, given by a physician, shall include instruction in the observation of children with regard to the development of their faculties, both intellectual and moral. Such observations, carefully made and accurately recorded, can not fail to produce extremely fruitful results, and it is to be hoped that the example of the College of Preceptors will be followed by other institutions which undertake the training of teachers.—*Lancet*.

THE TREATMENT OF EPILEPSY BY FLECHSIG'S METHOD.—In the *American Journal of Insanity* for October, Dr. Isabel M. Davenport, of the Illinois Eastern Hospital for the Insane, gives an account of her experience with this treatment in eleven cases in which the results were the same, that is, a cessation of the attacks, but no permanent benefit. Thirty patients of this hospital, says the author, received the Flechsig treatment for epilepsy by opium during the past year. Among the number were two boys, aged respectively fourteen and seventeen years, to whom the opium was given in the same quantity and with similar symptoms and results. With the exception of two patients all have been less irritable and have gained in flesh.

Dr. George Boody, of this hospital, who had twelve cases, reports the case of a man who had a cessation of the seizure for seven months and returned to his home apparently well; but he has been readmitted to the institution, the seizures, which returned, being as violent and frequent as before. Another man, who suffered for several years from epilepsy, with severe pain over the vertex, and also from intercostal pain, had no convulsions for three months, and though they returned he is entirely free from the distressing pain spoken of, and appears to feel that he is well repaid for the treatment.

Several interesting features, says Dr. Davenport, have been noted; namely, the dilatation of the pupils in all the women with two exceptions, and also the fact that all the female patients, with three exceptions, were

free from constipation, and in some cases the bowels were too loose, while the male patients, on the contrary, were very much troubled with constipation, which required large and frequently repeated doses of cathartic medicine, probably because the stronger muscular system of the men was not relaxed by the opium to the same extent as that of the women.

Several melancholiacs received much benefit from the large doses of opium, which exhilarated them and gave a sense of well being, which continued permanently in two cases, though the epilepsy returned.

After a careful and thorough trial, extending over a period of more than a year, Dr. Davenport concludes that :

1. Flechsig's method of treatment for epilepsy does not result in recovery.
2. That it is of benefit in that it gives many of these unfortunates a gratifying respite from the attacks, and thus adds to their comfort.
3. That it is soothing and quieting to the irritable patients, and exhilarating to those suffering from depression, thus relieving distressing symptoms in both cases.
4. That through the cessation of the seizures and other annoying symptoms the patient is enabled to enjoy something of life in general and to recuperate physically, and for these reasons she believes it is desirable to repeat it at intervals of two or three months, if thereby the results mentioned above can be obtained.

Dr. Davenport states that she has found no benefit from repeating the treatment oftener than at periods of three months after the bromides have been taken. In every case the seizures became less frequent and the patient less irritable.—*New York Medical Journal*.

A CASE OF PANCREAS ADMINISTRATION.—Bormann (*Wien. Med. Blätt.*, October 17, 1895,) points out that the treatment of diabetes with pancreatic extract has hitherto been productive of no very striking results. According to Brown-Séquard the pancreas has two functions—that of producing glycolytic ferment, pancreatin, and that of providing the body with a specific and indispensable internal secretion. If the perverted function of the pancreas is simply a diminished production of pancreatin, it is easy to supply by substitution therapeutics the deficient pancreatin to the organism. If, on the other hand, the affection is atrophy of the gland parenchyma, it is very probable that the administration of preparations of pancreas will fail, since there is no means of ascertaining whether they contain the specific secretion. Bormann records a case in which a definite result was obtained by pancreas therapeutics. The patient was a man of thirty, who had for many years suffered from general symptoms, with cough and furunculosis. Physical examination showed the condition to be one of diabetes mellitus, with chronic bronchitis and visual complications. About 3,600 c.cm. of urine, having a specific gravity of 1035-1048, and containing 400 g. of sugar, were passed daily. For twenty-four days he was treated first by dieting alone, then with the addition of apomorphine, salicylate of bismuth,

and opium. These reduced the quantity and specific gravity somewhat; the amount of sugar fell from 30 to 110 g. daily, but the patient lost weight. He was then put on one ox's pancreas (roasted) a day; after a week he stated that he could not go on eating it, so the juice was expressed and half a gland given daily *per rectum*. Ten days later 1½ c.cm. of pancreas extract subcutaneously was substituted for this. When he left the clinic after five weeks' pancreas treatment the sugar was below 30 g. daily, the minimum being 14.6. The patient was much better in himself, his bodily strength had considerably increased, he had gained eight and one half pounds in weight, and the thirst, together with the daily excretion of urine, had greatly diminished. Bormann thinks that if the literature of pancreas therapeutics could be brought into line with that of the thyroid treatment, and the method thus placed on a physiological basis, an effective and constant preparation might be obtained and employed.—*British Medical Journal*.

LUXATIO PENIS.—We have received from Dr. S. Baumgarten, of Budapest, a reprint of a paper he contributed to the *Deutsche Medicinische Wochenschrift* upon a subject to which attention has been recently called in these columns. He alludes to the fact that luxation of the penis is one of the rarest but most important injuries of that organ, and records a case in which the accident happened at the ritual of circumcision in infancy, while the reduction of the luxation was not effected until eleven years later. The child was taken to Dr. Baumgarten by his father, who said that his boy had no penis, which had disappeared, as stated, when he was undergoing circumcision at the hands of the constituted official. The primary difficulty in micturition seems to have been at once overcome, but when the child was six months old he was taken to a medical man, who succeeded in bringing the glans penis into view. It disappeared, however, within the course of the day, and the father was counseled to wait until his son was older and the parts more fully developed. From time to time a swelling would appear on the right side of the scrotum, evidently marking the site of the luxated organ. When seen by Dr. Baumgarten the penis was not visible, but the scrotum was well developed. Between the mons pubis and the upper margin of the scrotum were a circular scar and a rudimentary penial sheath, with a punctiform opening only admitting the smallest sized sound, which could not be introduced into the bladder. On palpation a cylindrical body could be felt beneath the skin between the scrotum and the right thigh, the lower end of which was mobile and shaped like the glans penis. During urination a small swelling appeared in the same region, evidently a kind of accessory pouch between the urethra and the external orifice above mentioned. In the operation which Dr. Baumgarten performed to liberate the penis, he first laid open this pouch and was able to draw out the glans and neighboring part of the organ, the rest requiring to be detached by the knife, owing to the adhesions. The formation of a

cutaneous covering to the exposed posterior part of the penis required a plastic operation, which was successfully accomplished. Dr. Baumgarten describes the method pursued in the ritual of circumcision, and enumerates the accidents that have been known to follow it, but this is the first case known to him in which luxation of the penis has occurred. He also recounts the facts of five other cases of luxatio penis that have been put on record, in each case due to severe injury, and in each an operation was performed to restore the organ to its normal site.—*The Lancet*.

THE ORIGIN OF HOSPITALS.—A correspondent writes: "Lately, in a local paper, a discussion has been raised as to the date of the origin of hospitals, and correspondents have settled the point to their own satisfaction in more ways than one. As a matter of fact the point is involved in obscurity. It is doubtful whether before the Christian era there were hospitals such as existed after. The evidence in favor of the existence of establishments for the sick among the Greeks is small, although Suidas mentions νοσηρυμεῖον (hospital); but as the word itself does not appear until the fourth century A. D., it does not add much weight to the contention that they were in vogue before Christianity, and it seems likely that the institutions before then partook more of the nature of convalescent homes. The Romans had a valetudinarium for sick soldiers, and there is no room for doubt that the Romans possessed a medical staff, as evidenced by monuments found in Britain. But, as a matter of fact, one of the first hospitals of which any thing is really known was that founded by Gallus in Cæsarea 370–80 A. D., and about the same time one was built at Rome by Fabiola. The origin of hospitals as they are now is certainly monastic. As the monks were the pioneers and patrons of arts and sciences, so they were in the founding of institutions for the sick. Every monastery had its infirmary, as every monastery had its school. The first distinct record of a hospital in England is mentioned in the life of Lanfranc, Archbishop of Canterbury, who, in 1080, founded one, a part of which was set apart for leprosy and the remainder for general diseases. The hospitals remained in the hands of the monks until the Reformation, when they went the way of the rest of the monastic establishments and passed for the most part into the hands of laymen, their revenues being taken away. It may be said that several of the existing London hospitals owe their foundation to the zeal of the monks, notably St. Bartholomew's and St. Thomas'."—*Ibid*.

MEDICAL PYOSEPTICEMIA.—Etienne (*Arch. gén. de Méd.*, October, 1895,) records two cases of general infection with the staphylococcus without definite visceral manifestation or other distinct localization. He refers especially to cases in which the generalized infection reveals itself by severe general symptoms, profound debility, and a characteristic temperature curve. The disease appears to be rare, the following cases being the only two which the author has seen. (1) A girl, aged twenty-three, in pre-

viously good health, began suddenly with pains in the limbs and abdomen, anorexia, vomiting, intense but not persistent headache, violent and repeated shiverings, etc. On the fifth day the anorexia was complete. There was no constipation, or diarrhea, or abdominal distension. There was no rash, and the spleen was not enlarged. No disease could be found in the other organs. About a week later the prostration was more marked. There were repeated and severe rigors, and occasionally vomiting. The temperature was irregular, occasionally exceeding 40° C. The condition of the patient became very threatening. About a week later improvement set in, the rigors becoming less intense and the vomiting less frequent. About seven weeks after the onset convalescence was established. Colonies of the staphylococcus aureus and albus were obtained from the blood on several occasions. (2) A man, aged forty-two, complained a fortnight before admission of lassitude, etc. Ten days later he had a rigor. On admission there was marked prostration, a dry, brown tongue, and a temperature of 40° C. The abdomen was a little distended, and the spleen and liver slightly enlarged. The urine contained albumen. There was some cough, with frothy expectoration. A bed-sore developed a week later. A general eruption of furuncles appeared, and the prostration became more intense. A week later the condition began to improve. Six weeks after the onset a large phlegmon appeared on the right side of the abdomen. The pus contained the staphylococcus albus and aureus. About three months after the onset convalescence was established. Some four months later there was an infective osteomyelitis of the left femur, which recovered. Numerous colonies of the staphylococcus were obtained from the blood on several occasions. The diagnosis could only be made in these cases by exclusion and bacteriological examination. It was impossible to find the point of entry of the infection. Both cases were due to a general staphylococcus infection, and both recovered in spite of the severity of the disease.—*British Medical Journal*.

INFANTILE PALSIES.—In a recent number of the *Neurologisches Centralblatt* there appeared an abstract of an interesting paper by Dr. Muratoff, the original of which was published in the *Deutsche Zeitschrift für Nervenheilkunde*. Six cases of diplegia in children were observed, in two of which death took place. In one of the two the clinical condition comprised idiocy, weakness of all four extremities, and spastic and athetoid movements, with contracture and atrophy of the right upper extremity. In the brain there was found after death widespread destruction of the central convolutions and the temporal region, while the frontal and occipital regions remained unaffected. In the cervical region of the cord there was atrophy of the cells of the anterior horns, especially on the right side, and there was descending

convolutions and of the paracentral lobule on both sides, and microscopical examination of these parts showed complete disappearance of the cells. There was also in the spinal cord a simple atrophy of the pyramidal tracts without degenerative changes. While in the first case, besides the symptoms of paralysis, there was also evidence of gross irritation, due no doubt to the destructive inflammatory process; in the second case there was an obsolete inflammatory process, with consequent atrophy of the central convolutions and simple atrophy of the conducting fibers, the whole to be regarded as probably the result of a developmental defect. Dr. Muratoff concludes that (1) in spite of the similarity of clinical appearances the various forms of diplegia in children may be the result of different pathological processes; (2) the congenital form is the result of meningeal hemorrhage and consequent atrophy of the central convulsions (the secondary changes in the pyramidal tracts are probably simple, not inflammatory, but depending upon interference with development); (3) in acquired forms the secondary degeneration is probably the result of a destructive lesion; and (4) a subdivision of the various cases of diplegia is necessary, such a classification being required as will take account of physiological and pathological changes.—*Lancet*.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.—Fortun y André (*Rev. de Ciencias Medicas de Habana*, November 5th,) reports the results of the serum treatment of diphtheria in Havana so far as he has been able to collect the statistics. The cases amount to 88, of which 12 died, a mortality of about fourteen per cent. Of the fatal cases, however, 6 died within less than twenty-four hours after the serum was used; deducting these cases, the mortality under the treatment is reduced to a trifle over seven per cent. All the fatal cases, with one exception, were cases of croup. In only one of these cases was tracheotomy performed. Of the cases that recovered, only 9 were cases of "true croup"; of these 2 were tracheotomized. In point of intensity the 88 cases are classified as follows: Severe, 36; moderate, 34; slight, 20. In 74 of the cases the diagnosis was established bacteriologically; in 6 of the cases Loeffler's bacillus was associated with streptococci and staphylococci. The effects of the serum were the same as those observed elsewhere. As regards unfavorable consequences, albuminuria was noted as following the injection only in 2; in 4 of the cases in which it was present before the treatment was begun, it diminished after the injection, and in 1 it altogether disappeared. In 4 cases the phenomena of reaction (rise of temperature and constitutional disturbance) were somewhat alarming; eruptions of various types were seen in 20 cases; symptoms of enteritis in 4; joint pain in 2. Serum from three different sources—Roux's in 15 cases, with 1 death; Behring's in 35 cases, with 6 deaths; and serum prepared in Havana by Drs. Davalos and Acosta, and having a strength double that of Roux's, in 27 cases with 3 deaths. The author is unable to give exact statistics of the death-rate from diphtheria in Havana

before the introduction of the serum method, but he says there is no doubt that it has diminished since the employment of antitoxin. He gives details of all the cases, with the names of the practitioners in whose care the patient's were.—*British Medical Journal*.

BLOOD CHANGES IN GASTRIC DISORDERS.—Blindermann (*Wien. Med. Blätt.*, October 31, 1895,) has investigated the blood of eighteen patients in Wassiljeff's clinic. Eight of these had chronic gastritis, two acute gastritis, four gastric ulcer, four carcinoma of the digestive tract. In acute gastritis the blood was found to be normal; in chronic gastritis the red corpuscles were normal in number or slightly diminished, the white corpuscles unaffected. In gastric ulcer the leucocytes were normal, the red corpuscles diminished, except in one case where hematemesis was absent; in the others the diminution was exactly proportional to the amount of hematemesis, chlorosis, and melena. In the cases of malignant disease, however (three of which affected the stomach and one the rectum), there was great diminution in the number of red corpuscles, with (except in one case) increased leucocytosis. The percentage of hemoglobin was much more reduced than in gastric ulcer. Blindermann concludes that: (1) Examination of the blood always affords a means of diagnosis between cancer of the stomach and other gastric disorders, particularly chronic catarrh and dilatation; (2) with rare exceptions the differential diagnosis between cancer and ulcer of the stomach is much simplified by microscopical examination of the blood; (3) in malignant diseases of the stomach the diminution in hemoglobin progresses steadily, whereas in gastric ulcer there is a sudden great drop after hematemesis, followed in a few days by return to normal. The only exception to the latter rule is in the rare cases in which pernicious anemia supervenes; this may be recognized by the constant diminution of hemoglobin, the number of the red corpuscles, and the presence of poikilocytes, microcytes, and macrocytes; (4) chronic gastric catarrh with marked dilatation causes no definite changes in the constitution of the blood.—*Ibid.*

VOMITING OF PREGNANCY RELIEVED BY USE OF THE CONTINUOUS CURRENT.—Dr. J. Larat contributes the detailed report of a woman, twenty years old, pregnant for the first time, whose vomiting became so persistent that she could retain no food whatever, night or day. Her three physicians, at the end of their resources, agreed upon abortion as the only chance of saving her life. At this crisis Dr. Larat was suggested and asked to try the electric treatment. He used the continuous current, applying the positive pole, the size of a five-franc piece, made of a plate of tin covered with amadou and chamois skin, to the neck, on the course of the pneumogastrics, by preference to the right. The negative pole of the same material, but the size of the hand, is applied to the epigastrium. The strength used was fifteen or sixteen milliamperes. After five minutes of this treatment

the patient was asked to drink half a glass of milk, and the electricity continued for ten minutes longer. This milk was retained for two hours, when part of it was vomited.

Dr. Larat gave the patient two or three applications in this way every day for about three weeks. At first a slight improvement would be followed by a relapse, but at the end of a week her condition was visibly improved. Two weeks later, when she was discharged, she was going about and rapidly regaining her strength, entirely cured of her nausea.—*Paris Journal de Medicine.*

AMYL NITRITE IN PNEUMONIA.—Hayem (*Sem. Méd.*, October 11, 1895,) describes the treatment of seventy-seven cases of pneumonia by inhalations of amyl nitrite. It is generally agreed that this drug should be used with great caution, four or six minims having hitherto been considered as a large dose. Hayem's experiences show that a much larger quantity may safely be used. For a single inhalation he gives 60, 80, or even 100 minims. These are administered, fifteen minims at a time, on a compress held two or three centimeters from the patient's mouth, the whole inhalation lasting from three to five minutes. In ordinary cases one inhalation a day suffices; in severe cases two, given morning and evening, are better. No accident ascribable to this treatment has followed. The inhalations are continued throughout the illness and for one or two days after the crisis has occurred. The drug does not seem to influence the duration of the disease or the temperature; the effect produced is purely local, consisting of a diminution, more or less marked in the dyspnea, in a modification of the sputum, which becomes less viscous, and in a diminution of the stethoscopic sounds. It does not seem to affect the virulence of the pneumococci; its action seems to be exercised entirely on the pulmonary circulation, which is probably subject to a sudden flushing with blood, analogous to that occurring in the skin, which hastens the return of the blood by the pulmonary channels and promotes the absorption of the exudation. In eighteen months seventy-seven patients were treated in this way, the deaths numbering sixteen. A large number of these were bad subjects, being drinkers or confirmed drunkards. Neurotic subjects bear the treatment badly, owing to the fears they entertain. It is highly important that during the inhalation the patient should be in the recumbent position.—*British Medical Journal.*

GALL-STONE IMPACTED IN SMALL INTESTINE.—Mr. J. Hutchinson, jr., at a recent meeting of the London Pathological Society, related the case of a patient from whom the calculus which he handed round had been removed. She was a woman seventy years of age, and the clinical symptoms were so clear that a positive diagnosis was made before operating. There was a previous history of biliary colic, and the obstruction had lasted three days. At the operation the intestine above the stone was

greatly distended and inflamed, while the part below was firmly contracted so that the stone could not possibly move in a downward direction. Many feet intervened between the point of impaction and the cecum. After the stone had been removed by incision through the intestinal wall the latter was sutured, and the patient made a good recovery. The calculus weighed only 120 grains, its long diameter being a little over an inch. He compared this dimension with that of Murphy's button, used in resection of the small intestine, the transverse diameter being exactly the same.

Dr. Septimus Gibbon said he had a fatal case of this kind many years ago in his own practice. The patient was a female, and the malady was diagnosed during life, but surgery then not being so advanced as now, laparotomy was not performed. The stomach was persistently kneaded, but death resulted in nine days, and at the necropsy a gall-stone was found impacted in the duodenum.—*The Lancet*.

ACUTE YELLOW ATROPHY FOLLOWING TWISTED PEDICLE AND OVARIOTOMY.—Stocker (*Centralb. f. Gynäk.*, No. 45, 1895,) observed a tumor in a woman, aged twenty-five, shortly after delivery. It was chiefly in the right side of the abdomen, and lay separate from the uterus. Suddenly violent pain set in, and torsion of an ovarian pedicle was suspected. Ovariectomy was performed; a large cyst with a pedicle twisted four times was removed. The tumor, which had developed in the right ovary, was livid and full of recent clot. There were no adhesions. Some bloody serum lay in Douglas' pouch. On the second day the patient became restless, then sleepy, and next day she was comatose. Urine was secreted sparingly and contained much albumin. The conjunctiva at length became distinctly yellow. The abdomen never felt tense to the last, the patient dying on the fourth day. The liver was found to be very small, flaccid, and intensely yellow; there were minute ecchymoses sparingly spread over its surface. The urine contained leucin and tyrosin crystals. There was no trace of peritonitis, and the pedicle was healthy. Stocker believes that the liver disease began before the ovariectomy, and was due to the torsion of the pedicle, necrosed products being absorbed into the circulation.—*British Medical Journal*.

THE TREATMENT OF TUBERCULOUS PROSTATITIS BY PERINEAL INCISION AND CURETTING.—Gaudier (*Annal. des Maladies des Organ. Gén.-Urin.*, No. 2, 1895,) reviews the history of this operation, which became possible after the introduction by Dittel in 1874 of the method of separating the anterior wall of the rectum by the curved perineal incision, and thus exposing the gland. This proceeding, at first undertaken only for opening prostatic abscesses, was later used for treating tuberculous disease, and many successful cases have been reported. Gaudier operated this way in the beginning of 1894, when the diagnosis had been made by the demonstration of tubercle bacilli in the sero-purulent secretion, expressed from the large and

painful gland. The patient was twenty-two years of age ; his urine off and on contained traces of blood, and defecation was painful. At the operation the prostate gland was found changed into a lumpy, cheesy mass. This was entirely scraped out, and the cavity, owing to a violent hemorrhage, packed with iodoform gauze. The whole wound was healed in fifteen days, without any trace of fistula. Since then the patient has had no morbid symptoms.—*Ibid.*

NEURITIS IN PREGNANCY.—The view of Eulenburg, that many cases described as puerperal neuritis are really cases of neuritis occurring in association with pregnancy, receives confirmation from a case published in a recent number of the *Deutsche Medicinische Wochenschrift* by Dr. Stembo. The patient was a young woman, aged twenty-four, who, in the second month of the first pregnancy, was seized with persistent vomiting, which continued for three months. During this time there were pains in the legs, and later distinct weakness in them, especially affecting the left leg. There was pain on extending the fingers, impairment of the movements in the lower limbs, atrophy of the muscles in the upper and lower extremities, especially in the left perineal region, and pain on pressure both in the nerves and muscles of both legs. There was also talipes equinovarus, the sensibility was impaired, the right knee-jerk was lessened, and the left could not be elicited. Electrical and other treatment effected much improvement, and this was considerably increased when pregnancy was completed.—*Lancet.*

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Iodide of potassium, 10 grams;
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 Sugar of milk, 3.75 grams.

M. D. S. Ft. pills No. 50.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ*."

Vol. 21.

SATURDAY, FEBRUARY 8, 1896.

No. 3.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.
JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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THE ROENTGEN RAYS.

The scientific world in general and the medical world in particular are all agog just now over the wonderful discovery of Prof. Röntgen, of Würzburg, that pictures (or rather shadows) may be made of objects covered by opaque media. The novelty of the idea and the light that it promises to throw into the benighted lurking places of disease are sufficient to stir into enthusiasm the dullest plodder in the medical workshop. For it is already clear that the new discovery, although handicapped by rigid limitations, makes certain the location of missiles and other foreign bodies in the limbs, settles the differentiation between fractures and luxations, determines the character of ankyloses, shows the presentation and perhaps position of the fetus in utero, and distinguishes between calculus in the kidney pelvis and pyonephrosis. And when certain mechanical appliances now in construction shall be perfected it is probable that pictures illustrating deformed pelvises, spondylolisthesis, calcareous infiltration of arteries and other organs, exostoses, acromegaly, osteitis deformans, gouty deformities, rheumatoid arthritis, etc., will be made.

Indeed it is hardly too much to anticipate that the eye of the physician and the surgeon will be able to follow disease into its remotest hiding-places in the thoracic, abdominal, and pelvic cavities, thus mak-

ing light the dark places of diagnosis, and endowing both medicine and surgery with exactness and certainty in the investigation of disease and the results of injury. Viewed in such light the discovery is sublime, and its value to mankind is immeasurable and incalculable.

We have said that the process had its limitations, and, alas! the most serious of these is the fact that the cranial bones impose an impenetrable barrier to the X-cathodal rays, and are likely to keep the brain in its wonted darkness. This is a sad disappointment to the neurologist, who must perforce, like a true philanthropist, content himself with indirect benefits and make merry on other men's holiday.

The discovery is Prof. Röntgen's only so far as perfecting the process of making shadow pictures is concerned. The rays, which are not his discovery, have been long known to the physicist, their great penetrating power was noted by Hertz, and even shadow photographs were made by their means by Lenard more than two years ago. The great man to whose original researches the principles and chief appliances of the discovery are due is William Crookes, the world-renowned chemist and physicist. For it was he who invented the vacuum tube by which gases have been attenuated into "radiant matter," the wonders of the actinic ray demonstrated, and the identity of matter and force established, or at least great point given to the theory that all matter is made up of foci of forces.

Perhaps the simplest and clearest description of Prof. Röntgen's method of taking shadow pictures through opaque media is from the able pen of Prof. Arthur W. Goodspeed, of the University of Pennsylvania, and published in the Medical News of the 15th instant. Prof. Goodspeed was the first scientist in this country to put the discovery to experimental tests. We append his communication in full :

Probably never before has the entire scientific world been simultaneously aroused to such a pitch of excitement as that caused by the recent remarkable discovery of Prof. Röntgen, of Würzburg, that it is possible to produce photographic effects through opaque substances such as wood, ebonite, flesh, and similar dense materials, while glass, which we customarily regard as the most transparent of media, obstructs the passage of the cathodal ray.

As it seems probable that this exhibition of energy is either a form of radiation or is intimately related to it, the term *radiography* might with propriety be applied to the process of producing the impressions.

The earlier reports from abroad indicated that the use of two induction coils were necessary, the secondary of one to be connected with the primary of the other, and that a Crookes "radiant-matter" tube be connected with the secondary of the latter. As glass proved comparatively opaque, it was deemed advisable to have a small aluminum window in the tube through which the rays could more easily pass. Later experiments, however, prove conclusively that these refinements are not needed, though without them a much longer exposure, perhaps an hour or more, is required. A single induction coil run by a few storage cells will excite an ordinary Crookes tube quite enough to produce most of the results yet published. The induction coil in its ordinary form is familiar to every practitioner. A much larger coil is needed than is used for physiological stimulation, that which is being used in the experiments at the physical laboratory of the University of Pennsylvania being about twelve inches long and four and a half inches in diameter. It was constructed by Apps, of London, and possesses a primary resistance of about 0.3 ohm and a secondary resistance of about 3,200 ohms. The Crookes tube represents as complete a vacuum as it is possible to obtain, and is supposed to have an interior pressure of about one millionth of an atmosphere. The negative electrode from which the X-rays start is an aluminum disc about a half inch in diameter. With the apparatus at present used by the writer an exposure of an hour or more was allowed. An ordinary photographic camera is used, having an aluminum shutter, which remains closed. The sensitive plates are entirely inclosed in the photo-holder, which is placed about five inches from the end of the Crookes tube, in a horizontal position on the table. The subject to be *radiographed* is placed on the cover of the plate-holder. The plates are developed and fixed in the usual manner. Radiograms to any extent may be printed upon any sensitized paper.

Notes and Queries.

"BACTERIA IN THE DAIRY."—That we may count upon microbes sometimes as our friends and sometimes as our enemies is well illustrated in the bacteriology of milk and milk products. Though milk may leave the udder perfectly sterile, yet a few moments of contact with the air, and especially the air of insanitary surroundings, are sufficiently long to be the starting point of the development of a whole microbial menagerie. By fission alone—that is, by splitting in two, and by the resulting two dividing again in the same way—one bacterium may become the parent of over sixteen million bacteria in twenty-four hours. The composition of milk is such as to be most favorable to the growth and development of organisms, pathogenic and non-pathogenic. Some are detrimental to the healthy condition of the milk itself, or, in other words, milk has its own diseases to contend with. Experience is ever teaching how imperative it is that the strictest care should be taken to protect milk against the possibility of microbial invasion. The risks of pollution are great, and may arise from an unhealthy or dirty condition of the cow, or the stall, or of the milker's hands and clothes. The air of the cow-house is frequently made insanitary by cleaning it out and dislodging dirt just previously to milking, and another source of contamination is the diluting of milk with unwholesome water which may be infected with typhoid fever or cholera poison, or by placing the milk in dirty vessels, or by exposing it to the atmosphere of warm or unhealthy places, as cupboards. With these possibilities of pollution in mind the advantages gained by sterilizing or Pasteurizing milk by boiling are evident. Particularly is this so in the case of bottle-fed infants, the lives of many of whom would be saved from fatal diarrhea, so frequent in artificial rearing, were these precautions taken. The same lesson is taught by the fact that mother's milk is sterile. Although boiling will destroy the disease-producing germs in milk, it may still leave spore-bearing bacteria, which in course of time would produce undesirable changes in the milk itself and render it unwholesome. On the other hand, there are friendly germs to be found in milk, whose functions can be cultivated and turned to account in the production of an acceptable flavor in cream and in butter. After clearing the milk or the cream of competing organisms by Pasteurism, it is sown with a pure culture of lactic-acid-producing organisms. The flavor of the butter and, moreover, its keeping qualities being dependent upon the character of the souring process undergone by the cream preparatory to churning, a uniform product acceptable in both these respects may be obtained by proceeding carefully on these lines. The inculcation of these methods among dairy farmers would add an impe-

tus to the milk-products industry and probably bring it into a greater state of prosperity. It is satisfactory to record that efforts are already being made to do this by lectures and the publication of lectures in pamphlet form and in the agricultural papers.—*The Lancet*.

THE ANTITHERMIC ANALGESICS.—J. Schmitt (*Rev. Méd. de l'Est*, October 15th.) reviews, chiefly clinically, these remedies. They may be classed as follows: (1) Phenol group, with phenic acid as its chief. The chief action of these is antiseptic; their analgesic powers are feeble. The objections are that they are protoplasmic poisons, they paralyze or destroy the blood corpuscles and depress or paralyze the nervous system. Their antithermic action is energetic but transitory. More permanent reduction of temperature can be obtained only at the risk of dangerously toxic doses, or at that of inducing cachexia and profound anemia by frequently repeated small doses. (2) The aromatic acid group, chief of which is salicylic acid. The chief characteristic is a still predominant antiseptic action, less toxicity than group 1, owing to the substitution of COOH for OH. Apart from rheumatism their analgesic power is weak. The large doses required to lower temperature cause digestive troubles, buzzings in the ears, and even cardiac enfeeblement and renal irritation. But with undamaged kidneys they increase diuresis and depurate the blood of extractives and nutritive residue. (3) The anilide group. Its antiseptic properties, though strong, are less than those of phenol and salicylic acid. The fall of temperature caused is rapid, but transitory, with abundant sweats, shiverings, cyanosis, and often hemoglobinuria. (4) The phenylhydrazin group, which are even less satisfactory than the anilides. Like the latter, they are eliminated as amidophenol derivatives. (5) The chinoline group possess considerable antifebrile and antiseptic properties, but are liable to disorder the digestive tract and to give rise to severe nervous symptoms. Their antithermic power is fugacious, attended by profuse sweating, collapse, etc., and attended by too severe corpuscular destruction. Hence, as a group, they are not satisfactory. (6) Pyrrol group, the most important and almost the sole representative of which is antipyrin. Endued with a real antifermentative and microbicidal action, almost inoffensive as regards the blood, it possesses antithermic and analgesic properties second to none. A few derivatives of antipyrin must be mentioned—salipyrin, tolypyrin, tolysal—which do not present any special advantages.—*British Medical Journal*.

“TUBERCULOUS” VEL “TUBERCULAR”?—For some years past we have, so far as we are able to control the terminology employed in these pages, been particularly mindful of the different senses attaching to the word “tubercle.” Originally a purely anatomical and coarsely morphological expression, it has come to signify a special infective disease, the ultimate cause of which is admittedly a specific microbe. The anatomical term of course remains; it is etymologically accurate, but the confusion that has

arisen from its transference from this, its legitimate and general application, to denote a special kind of nodule evoked by a specific agent is rendered worse confounded when the phrase is used in the attributive sense. Although custom has hallowed and made inviolate the noun "tubercle" in its particular as well as its general application, there is no need for a similar commingling of terms when we employ its derivative adjective. The word "tubercular" is the anatomical equivalent of tubercle, and has always been so employed in the anatomical text-books. It has also, with a perversity that perpetuates the initial blunder, been equally applied to denote the various pathological changes induced by the presence of the bacillus tuberculosis. Our readers will perceive that the distinguished surgeon who has just delivered the Bradshaw lecture has adopted this same phraseology. In this respect he is by no means singular, for the like use of the term is made by many other writers and teachers of medicine and surgery. On the other hand, not a few—and among them may be reckoned the *Lancet*—have attempted to dispense with "tubercular" as indicative of the specific infection, preferring to it the term "tuberculous," which, it may be remarked, is also commonly employed in the pathological writings of our French and German neighbors. We would fain see the latter practice universally adopted, not from any sense of pedantry, but as a matter of lucidity and accuracy in description. As for those who employ both terms indiscriminately in describing the same things, we fear that they are past praying for. Scientific nomenclature is certainly not free from etymological blemishes, but at least, when there is a choice of terms, let us be consistent in the way in which we apply them.—*The Lancet*.

THE ACTION OF TOLUYLENEDIAMIN AND THE PATHOLOGY OF JAUNDICE.—Hunter (*Journ. of Path. and Bacteriol.*, August, 1895,) records the results of a number of experiments with respect to the action of toluylenediamin and the pathology of so-called non-obstructive jaundice. Previous researches by Stadelmann and others have shown that the jaundice produced by poisoning with toluylenediamin and phosphorus, and probably many forms of jaundice hitherto regarded as non-obstructive, are really obstructive in nature. According to Stadelmann, an increased destruction of blood occurs; this gives rise to an increased formation of bile pigment, and an alteration in the character and an increased concentration of the bile to which the obstruction is due. Hunter records a number of experiments on animals which show that toluylenediamin, injected subcutaneously, produces extensive catarrh of the bile ducts and duodenum, and that the bile is one of the channels through which toluylenediamin is excreted, though only in small quantities. The author believes that an

mucus causes concentration of the bile, the flow of which finally becomes arrested for a time, and that the obstruction is produced primarily by catarrh of the bile ducts at their origin. In order to study the relation between jaundice and hemoglobinemia, the author produced the latter condition experimentally; but he found that mere excess of hemoglobin in the blood, or increase of the bile pigments, apart from the operation of other causes, was not sufficient to give rise to jaundice. The author also records a number of observations on the mode of action of toluylenediamin and other agents which destroy the blood corpuscles. But he found that the blood changes produced were not so distinctive, either as regards their character or degree, as to explain the remarkably different action of these drugs in producing jaundice. The experiments show that neither hemoglobinemia, nor mere increase of the bile pigment, nor changes in the character of the hemoglobin, can account for the increased viscosity of the bile which occasions the jaundice in poisoning by toluylenediamin. Hunter concludes that the increased viscosity of the bile, which is the cause of the obstruction (and therefore of the jaundice), is produced by catarrh of the bile ducts due to the excretion of the poison or its products.—*British Medical Journal*.

THE "NEUROSES OF CULTURE" AND THEIR REMEDIES.—What Carlyle calls "diseased developments" are all too certainly caused by unhealthy literature, resorted to, as it is apt to be, for vicious excitement or sensational "distraction." We lately commented on the enactment of certain Swiss Cantons by which reports of suicide are excluded from their press, these reports having been found to have a contagious effect on individuals already disposed to self-destruction. The recent charge of one of our own judges in delivering sentence upon two juvenile murderers pointed so far in the same direction as to convey a strongly worded *caveat* against indulgence in the literature of crime. There are, moreover, other forms of mental deterioration induced by printed matter, less deadly indeed, but tending to disastrous results, some of which have not inaptly been described as "neuroses of culture." This was incidentally illustrated the other day in an exceedingly vivacious and instructive lecture by Mr. Frederick Harrison on the "The Choice of Books," a subject of increasing importance, as he demonstrated, to the busy man. "Evil communications," indeed, may exert their power to "corrupt" in literature as well as in life, and the lecturer was but confirming the remark of educationists like Dr. Arnold when he refers to the sinister effect of such ill-chosen company as often finds its way into the home circle from the lending library. Idle reading is the fruitful source of idle thinking, which culminates in incapacity for thought, from which a further step in the intellectual down-grade is inability to sustain attention or even collapse of the reasoning power. "Fatty degeneration of the brain" is the definition Mr. Harrison draws from the language of pathology for the commonest results of idle reading, and there is no doubt a condition of the mental instrument

which corresponds to the pathological state referred to. Mr. Harrison seeks a counter-agent to the idle reading he deprecates in a sound choice of books, and a steady, intelligent mastery of their contents. The suggestion is a good one, but a better seems to us practicable. Let the busy man cultivate, or even create for himself, a subject of interest apart from that of his daily employment; a subject, be it scientific or mechanical, or artistic, to which he can turn in his leisure hours for mental distraction and exhilaration. Let him pursue this systematically, with or without the aid of others also interested in the subject, and it is astonishing how quickly his familiarity with it makes it a source of solace and relief amid other cares. Biography teems with instances of men who, as "busy" as Mr. Harrison's busiest man, have in this way found time to enrich the stores of science, of literature, of art, of knowledge, indeed, in every department. It is one of the mental occupations which are "twice blest," primarily as regards the individual, secondarily as regards the outside world. Resorted to in youth, it becomes the healthy distraction of middle life and old age, till it sometimes brings to him who practices it a reward in the present and a recognition from posterity which the formal business of his life may have failed to win. *Lancet*.

INTUBATION IN DIPHTHERIA.—Bokai (*Deut. Med. Woch.*, November 14, 1895,) discusses the question of how long the tube must remain *in situ*, his observation being based on 763 cases of intubation. Of the 763 cases, 268 recovered. Ninety cases, with 45 recoveries, have occurred since the introduction of the serum treatment. Out of the 673 before the serum treatment, 223 recovered, and only in 8 cases was secondary tracheotomy necessary. The duration of intubation was from a quarter of an hour up to 240 hours, except in 7 cases, where it exceeded 10 days. In 62.77 per cent the tube was in under 72 hours, and in 82.33 per cent under 120 hours. The author gives details of cases in which the duration was under 24 hours, and also of two cases in which it was 349 and 360 hours respectively, the latter being the longest time. The mean average duration was 79 hours in 215 cases. It is the author's custom to withdraw the tube after 48 hours; in the 27 cases in which the tube was out before this time, it was due to the child expectorating it or pulling it out by the string, and to further introduction being unnecessary. In the 45 intubated cases of recovery under the serum treatment a secondary tracheotomy was only once necessary. The minimum duration of intubation was 2 hours, the maximum 168 hours. In 77.26 of these cases the tube was left out within 72 hours. The author gives his tables which show that under the serum treatment the number of cases in which the tube can be left out within the first and second 24 hours is greatly increased. He compares these figures with those obtained from observations on withdrawing the cannula in tracheotomy, where the results are very different. Although the tube remained over five days in 16.2 per cent of the author's intubated cases, yet there was no case of severe

decubitus (erosion) in the larynx. Thus secondary tracheotomy can be avoided. If the above numbers are added to those of Bleyer and Baer, it is found that out of a grand total of 479 intubated cases the tube remained in longer than 5 days in 19.2 per cent. The author then discusses the relation of this length of time to the question of decubitus. Finally he draws the following conclusions: (1) That the time for withdrawing the tube varies within very wide limits; (2) that the average time was 79 hours before and 61 hours after the introduction of the serum treatment; and (3) that he can not share the opinion of some writers who maintain that a secondary tracheotomy must be done if the tube can not be left within five days. No definite fixed time can be laid down. The unquestioned presence of severe decubitus in the larynx is an undoubted indication for a secondary tracheotomy, but the mere fear of such arising should not be taken as an indication—*British Medical Journal*.

DEFECTIVE HEARING IN SCHOOL CHILDREN.—Dr. Wehmer, in an admirable work on school hygiene recently published, expresses his conviction that while defects of vision among children in schools have attracted much attention of late, those of hearing have not received nearly so much as they deserve. Weil found thirty-five per cent of the pupils in the schools in Stuttgart, and Moure seventeen per cent of those at Bordeaux more or less deaf in one or both ears. The degree of deafness is very easily determined by requiring the child to repeat words uttered at a measured distance in a quiet room, and unilateral deafness by closing one or other ear with the finger. Much will of course depend on the clearness of articulation, and the pitch, loudness, and volume of the speaker's voice; but Dr. Wehmer considers that words spoken in a man's ordinary conversational tone should be recognized without difficulty by any one whose hearing is normal at a distance of fifteen to twenty meters, say, sixty feet. Any child whose hearing is defective or doubtful should be examined by a medical expert as to the state, not only of the ears, but also of the tonsils and naso-pharynx. Those suffering from chronic catarrhs or adenoid hypertrophies of the naso-pharynx may be recognized by their staring stupidly at the teacher, while others follow the instruction intelligently, and their power of hearing varies with the weather. Their infirmity is often mistaken for mental deficiency or culpable inattention; and while diseases of the ear itself, if neglected, may lead to permanent and total deafness, or even to fatal meningitis, those of the naso-pharynx render the child specially susceptible to the infection of diphtheria, and in the opinion of some authorities tend to produce the enfeebled intellect which at first they only simulate. The sooner such cases are submitted to surgical treatment, the better for the children both physically and mentally. Such children are a drag on the work of a school, and even if the ultimate consequences to themselves are less grave than those we have mentioned, they are heavily handicapped through life, growing up into comparatively useless and unsuccessful members of society. The mat-

ter is one of really national importance as regards the future of the rising generation, and furnishes an argument in favor of the appointment by the school boards of medical inspectors in their several districts, men who should be competent to detect errors of accommodation and other defects of vision, and to use the laryngoscope and rhinoscope, and familiar with the early diagnosis of infectious diseases and the essentials of practical sanitation, as well as with the methods of anthropometry. It is scarcely possible to overrate the scientific and social results that might be achieved by such systematic observations.—*Lancet*.

CHOLERA AND PREGNANCY.—Kovalsky (*Répert. Univ. d'Obstét. et de Gynéc.*, October 25, 1895), after considering the experience gained in Russia on this question, concludes that pregnancy does not appear to predispose to cholera, though the small percentage of cholera cases among pregnant women is explained by the small number of such women relatively to the general population. The prognosis is extremely grave for the fetus, and the mortality of eighty-one per cent is, perhaps, lower than might be expected. As for the mother, the danger does not seem much greater than in a non-pregnant subject; 57.8 per cent is the proportion, according to experience in Russia. Between twenty and forty seems the most susceptible age. This represents the greater part of sexual life. It is not clear why younger pregnant women should be less subject to cholera. Most probably the truth is explained by the number of married women over twenty being relatively larger. Kovalsky frankly admits that no ratios of any kind of scientific value can be established between the presence of cholera and the period of pregnancy, the previous sexual history of the mother, or any other essential obstetric factor—even the possibility of abortion.—*British Medical Journal*.

THE BLOOD IN CHRONIC DISEASES OF THE STOMACH.—Among the several diagnostic criteria, serving to differentiate chronic ulcer of the stomach from cancer of that viscus, may perhaps be reckoned the results of examination of the blood, although there are cases of the former class which apparently exhibit as profound a degree of anemic cachexia as does malignant disease. Dr. Blindermann is, however, convinced that hematological examination suffices to establish a difference, and publishes the results of a certain number of observations he has made in each class of cases. He concludes that it is possible by this means to differentiate between cancer and other chronic diseases of the stomach, including chronic catarrh, ulcer, and gastrectasis, although he admits that in the case of ulcer some exceptions do occur. One main difference is that in the case of cancer the hemoglobin diminishes progressively, whereas in ulcer the rapid loss in the amount ensuing on hematemesis is soon regained. The exceptions to this rule are to be found in those cases of gastric ulcer in which, as Rosenstein has shown, pernicious anemia develops, and where there also

occurs diminution in the number of red corpuscles as well as the appearance of poikilocytes, microcytes, and macrocytes. Chronic gastric catarrhs, with marked dilatation, cause no manifest change in the composition of the blood.—*Lancet*.

GASTROSCOPY.—Rosenheim (*Deut. Med. Woch.*, November 7, 1895,) first discusses the position of the cardia and the course of the lowest part of the esophagus. He concludes that the usual position of the cardia in the adult is opposite the twelfth, rarely the eleventh, dorsal vertebra. The anatomical relations are important in respect to the gastroscope. He maintains that where it is impossible to pass a stiff tube into the stomach with the patient in the dorsal position, the difficulty is due to muscular cramp or to the physiological bend at the esophageal foramen in the diaphragm. By introducing the rigid tube from the right side of the mouth and pressing the point to the left, the lowest part of the esophagus can be most readily passed. A certain gentle pressure may be necessary, and a change in the patient's position from the back to the right side may facilitate it. In a minority of cases with disease involving the cardia, the parts may not be distinctly seen by the gastroscope without an anesthetic. The author then refers chiefly to Mikulicz's investigations into esophagoscopy. This authority used a curved tube in order to overcome the difficulty of passing through the lowest part of the esophagus; he thought that it was impossible to accomplish this with a straight tube. This curve introduces difficulties in respect to the optical arrangements. The author maintains that the optical apparatus should be in the straight line. His observations lead him to say that in nearly seventy per cent of the cases examined by him a straight gastroscope can be passed into the stomach. Under certain conditions, such as an abnormal curving of the esophagus due to pathological causes, it may be impossible. A local spraying with cocaine by means of a special apparatus has been tried by the author to overcome the cardio-spasm, but with indifferent success. He concludes that with few exceptions it is possible with a straight or slightly curved instrument to get deep enough into the stomach for gastroscopic purposes without an anesthetic and without doing any injury. One gastroscope will not suit all cases, but a straight instrument suffices in by far the majority of cases. The author gives details of his gastroscope, which is made by Hirschmann, of Berlin.—*British Medical Journal*.

MUSTARD AS AN ANTISEPTIC.—Roswell Park called attention to the remarkably efficient properties possessed by mustard as an antiseptic or sterilizing agent for the surgeon's hands and for the skin of the parts to be operated upon. His custom is to scrub his hands thoroughly with a mixture of green or other soap, corn meal and mustard flour, using this for about five minutes. After rubbing it thoroughly into all the crevices and creases of the hands and nails by aid of a nail-brush, one may be absolutely

certain that his hands are sterilized; no matter what he may have been doing previously. Roswell Park has no hesitation in proceeding from a necropsy to the operating room if he thus protects his hands. Used as indicated the mustard leaves no unpleasant sensation; and one may feel that by the time it produces unpleasant tingling or rubefaction of the skin its essential oil has done its desired work as an antiseptic. He has discarded all other means of preparing the hands, and in several years' use of mustard in this way he has never been disappointed, nor had the slightest reason to question its effectiveness. He adds that mustard is an admirable deodorizing agent, and will take away from the hands all offensive odor of dead or dying tissues, all redolence of iodoform, etc.—*Medical News*.

GONORRHEAL PLEURISY.—Faitout (*Arch. Gén. de Méd.*, October, 1895,) first refers to the cases reported previous to 1878, when Talamon denied the existence of any conclusive example of this disease. He then mentions the case of Cornil and Klippel, in which a young woman with gonorrhea had a pleural effusion. At the necropsy, besides the effusion, there was pus in the fallopian tubes, but no micro-organisms were demonstrated in it. The connection between the two diseases was open to some doubt in this case. In Baisle's case there was gonorrheal rheumatism, as well as evidence of a pericarditis and a dry pleurisy. In Ducrey's case a young man was seized with fever a few days after acquiring gonorrhea. First a right then a left pleurisy developed, later the knee and thumb joints were involved, and eventually the peritoneum was implicated. The effusion rapidly disappeared. In McDonnell's case a young man had an acute gonorrhea some four months previously. He had a further attack four weeks before his present illness. After exposure to cold he had pains in the knees, thumb, etc., and a double friction sound was heard over the base of the heart. Later he had an effusion into both pleural cavities. The patient made a good recovery. McDonnell believes this to be an example of a gonorrheal affection of the serous membranes, because (1) there had been no previous rheumatic affections; (2) the temperature was only raised at the onset of the cardiac and pleuritic symptoms; (3) the articulations were but slightly affected, and (4) there was no sweating. The case of Mazza was more convincing. A girl, aged eleven, had been raped by a man suffering from gonorrhea. A few days later she had a polyarthritis and a double pleurisy. It is said that there was an evidence of an endopericarditis. Mazza found the gonococcus, both morphologically and by culture, in the pleuritic fluid. The author lastly discusses how the gonococcus could get to the pleura. It must be assumed that it is carried by the blood, as its presence there has now been demonstrated by several reliable observers. The investigations are too few to determine whether the

A MEDICAL APOLOGIST FOR THE ABUSE OF MEDICAL CHARITIES.—Dr. Thomas J. Moss, of New York, in the *Medical Record* of October 12th, writes to refute the ordinary views held as to the frequent use of medical charities by those for whom they were never intended. His great argument is that well-dressed people are not necessarily well off. "All of these people must appear well dressed at their places of business or discharge would quickly follow." These institutions (free dispensaries) are labeled "free." "Why, then, should they advertise free treatment, and when once the patient is within the toils demand a fee?" This is either a play upon words or is playing with the intelligence of the profession and the public. Nobody denies that well-dressed people may occasionally be as poor as those who are badly dressed; in other words, nobody denies that mere dress is not a guide to the means of a patient. Nobody wishes to deny to decent, well-dressed people the help of a free or provident dispensary. Still less does any one wish to deny them facilities for getting special help or a special opinion in special circumstances. What the profession universally, with the exception of Dr. Moss, demands, is that in ordinary circumstances ordinarily well-to-do people of all classes but the poorest shall pay for medical attendance as they pay for all the other commodities of life. Ours is the only profession that accommodates itself to the means of the classes who are not rich, and yet the only one that is expected to act without due remuneration. By all means let the poor be healed in an emergency, if necessary, for nothing, but let us be sure that they are poor, and even then society and not the medical profession only should bear the cost.—*Lancet*.

VACCINE IMMUNITY.—Beumer and Peiper (*Berl. klin. Woch.*, August 26, 1895,) observe that the active agent in vaccine still remains undiscovered, and yet its microparasitic character is hardly contested. A protective action is induced by the inoculation. The duration of this protection varies, according to different observers, from six to seven up to ten years. Analogy with other diseases would suggest that protective bodies are developed in the protected individuals. The authors then refer to the recorded researches into this subject, where an attempt has been made to immunize animals by using the serum obtained from already vaccinated animals. The results have, however, been discordant. The authors have themselves made a series of experiments, chiefly on calves, in which they have used the blood serum or defibrinated blood of vaccinated calves, but with negative results. They conclude that in the blood of vaccinated calves no protective bodies are to be found which can confer immunity upon other calves, or that these bodies exist in such small quantities that any practical application appears to be excluded.—*British Medical Journal*.

THE ABOLITION OF THE CONTAMINATING SLATE.—War against the school slate and pencil has been declared. Following the example set by the New York City Board of Health, calling upon the school authorities to

abolish the use of slates on the ground that they spread contagion, comes the adoption of a resolution by the Mount Vernon Board of Education to the same purpose, and providing for the use of pads of paper instead. The alleged reasons for this action, in addition to the objection to the slate from a sanitary point of view, is that paper is now cheap, pads now being sold which are suitable for school purposes for from two to five cents each. Public school and health authorities in many cities and towns now have the subject under discussion, and will probably likewise decree that the slate and slate-pencil must go. These hitherto useful articles will now be of value only to receive "spirit messages" from the other world through so-called mediums.—*Journal American Medical Association.*

BROMOHYDRATE OF ARECOLIN.—Mouquet (*Nouveaux Remèdes*, November 24th.) states that bromohydrate of arecolin, an alkaloid extracted from the areca nut, has a powerful sialogogue and diaphoretic action, and markedly stimulates intestinal peristalsis in horses and other animals. It has the same properties as eserine and pilocarpine, but in a higher degree, and the indications for its use are the same. Given hypodermically in doses of two centigrams to twenty-five milligrams it is found useful in animals, especially in the treatment of intestinal indigestion. Areca nut, though largely employed in veterinary practice, is little used in human medicine. The editor of the *Nouveaux Remèdes* suggests that arecolin might be worth trying on the human subject, but it would be prudent to begin with very small doses, such as two to four milligrams. Areca nut is said to be a powerful anthelmintic, the administration of which does not require to be preceded by a purge. It can be taken in milk or in soup without any unpleasant taste being perceived.—*British Medical Journal.*

THE FOUNDER OF THE "LANCET."—The *Lancet* publishes in the first number for the new year an interesting biography of its founder and first proprietor, Thomas Wakley. Born late in the last century, descended from a sturdy line of Anglo-Saxon farmers and landholders, the youngest of thirteen children of a father who lived to be ninety-two, and was a cross-country rider when more than ninety years of age, his youth spent on his father's farm, he thus inherited and acquired the strong physique, sterling common-sense, and good-nature which later stood him in such good stead in all the struggles and controversies in which he was involved and enabled him to secure for the *Lancet* the high place in journalism which it always held under its founder's management, and continues to hold under that of his descendants who have succeeded him.—*Boston Medical and Surgical Journal.*

A NEW METHOD OF ESTIMATING ALBUMIN IN URINE.—Riegler (*Wien. Med. Blätter*, November 28, 1865,) brings forward a new and rapid method of estimating albumin by means of the refractometer. It depends upon

the power of his new reagent, asaprol, to precipitate all albuminous substances in acid solution; the precipitate is soluble in weak caustic soda or potash, and the refractive index of the solution bears a direct relation to the amount of albumin present. In practice the asaprol (ten per cent) is made up with ten per cent hydrochloric acid. Exactly 25 c.cm. of decinormal potash solution are used, and added to the precipitate resulting from the mixture of 5 c.cm. of asaprol solution with 50 c.cm. of urine. The refractive indices of the resulting fluid (after filtration) and of the potash solution are determined by Pulfrich's refractometer, and their difference divided by 270 gives the exact percentage of albumin present. The coefficient 270 was determined by Riegler as the result of experiments on measured quantities of albumin.—*British Medical Journal*.

THE "LANCET" FOR PEACE AND GOOD-WILL.—In a recent issue the *Lancet* alludes editorially to the intimate and beneficial character of the mutual intercourse between English and American medical men during the last generation, and points out that if the question of peace or war were referred to medical men, there could be no question of the continuance of cordial relations. In the same issue Dr. T. Lauder Brunton, under the title of "Psychology of President Cleveland's Message," points out that that message, while apparently warlike, was really pacific, and the time chosen, just before the Christmas season, was especially favorable for the two great nations which it concerns to put the proper, that is, the peaceable, interpretation upon it. The friendly feeling between the members of the learned professions in England and this country is certainly a matter for congratulation, and it is pleasant to know that the influence of our valued English contemporary is for peace and good-will.—*Boston Medical and Surgical Journal*.

OVARIOTOMY IN A CHILD AGED SIX.—Rein (*Répert. Univ. de Obstét. et de Gynéc.*, October 25, 1895,) operated successfully, at Kieff, on a girl aged six. The tumor was a multilocular cyst of the left ovary. On the third day the patient's period ("règles") appeared. It is noted in the report that puberty was premature in this case, Rein believing that the abnormal phenomenon was the cause of the development of the cyst. The author, however, does not state that any symptom of precocious maturity was noted before the operation. Recovery in this instance was rapid. Childhood and infancy, Rein remarks, are favorable to laparotomy. Fenomenoff has successfully performed abdominal section on a newborn child.—*British Medical Journal*.

AT LAST we are informed by the secretary of the New Decimal Association that the metric system will be introduced into the new edition of the *British Pharmacopeia*. This is an important advance in the direction of the general adoption of metric weights and measures in this country, which step, it will be remembered, was recently recommended by a Select Committee of the House of Commons.—*Lancet*.

Special Notices.

THE DECADENCE OF OPIUM.—Wendell Reber, A. M., M. D., Pottsville, Pa., Oculist and Aurist to the Children's Home, under the above caption in the *Buffalo Medical Journal*, writes: "We would not banish opium. Far from it. There are times when it becomes our refuge. But we would restrict it to its proper sphere.

"In the acute stage of most inflammations, and in the closing painful phases of some few chronic disorders, opium in galenic or alkaloidal derivatives is our grandest remedy—our confidential friend. But here the application should cease; and it is just here that the synthetic products step in to claim their share in the domain of therapy.

"Among the latter, perhaps none has met with so grateful a reception as antikamnia, and justly so; for, among all the contributions of pharmaceutic chemistry, none so fully merits our confidence as this one.

"Given a frontal-temporal-vertical or occipital neuralgia growing out of an uncorrected ocular defect, it will almost invariably arrest the head pain until such time as the ocular trouble can be corrected with glasses. In the terrific fronto-parietal neuralgia of glaucoma, or in rheumatic or post-operative iritis, it is of signal service, contributing much to the comfort of the patient; and, I have sometimes thought, exerting an undeniable influence over the ocular disease. In this last group of cases I have seen the most benign effects follow the hourly administration of ten grs. of antikamnia until the pain is relieved. It will seldom be necessary to exceed sixty grains of the drug.

"Its range of application is wide. It is of positive value in certain forms of dysmenorrhea; it has served me well in the pleuritic pains of advancing pneumonia, and in the arthralgias of acute rheumatism; on several occasions I have been able to allay with it the lightning, lancinating pains of locomotor ataxia; but nowhere do I employ it with such confidence as in the neuralgias, limited to the area of distribution of the fifth nerve. Here its action is almost specific; surpassing even the effect of aconite over this nerve."

NEUROSINE.—The most powerful neurotic attainable, anodyne and hypnotic. A reliable and trustworthy remedy for the relief of hysteria, epilepsy, neurasthenia, mania, chorea, uterine congestion, migraine, neuralgia, and all convulsive and reflex neuroses. The remedy par excellence in restlessness of fevers, producing natural sleep. Composition: Chemically pure bromides of potassium, sodium, and ammonium, zinc, extract belladonna, cannabis indica, and cascara sagrada with aromatic elixirs, the medicinal effects of which the profession are well acquainted.

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THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXI.

LOUISVILLE, KY., FEBRUARY 22, 1896.

No. 4.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

OBSTETRICAL SUPERSTITIONS.*

BY THOMAS S. BULLOCK, M. D.

Assistant to the Chair of Obstetrics and Gynecology, University of Louisville.

In no department of medicine does the practitioner meet with so many absurd superstitions and traditions as in the practice of obstetrics. Like all superstitions they are difficult to eradicate, and woe to the venturesome practitioner who undertakes the job. He is at once set down as having very little knowledge and less experience.

It is not my purpose to give a list of these superstitions or traditions, but merely to mention some of the most common ones, laying special stress upon those productive of great harm to the lying-in woman and her offspring.

As soon as a woman is known to be pregnant she is overwhelmed with advice from those of her friends who have been through the mill. The husband does not always escape, but is commiserated with on account of morning sickness. I have never seen a case of masculine morning sickness that could not be more properly ascribed to the worship of Bacchus than of Venus. A favorite and largely advertised remedy for lessening the pains of labor is known as "Mother's Friend." It is an ointment, and should be rubbed daily over the abdomen. Its use is said to insure an easy and uncomplicated labor. I have heard intelligent and well-educated women highly laud this remedy. She is urged also to look only at beautiful objects of art, etc., if she desires a

* Read before the Louisville Medico-Chirurgical Society, January 10, 1896. For discussion see page 138.

pretty child. I have known these same well-educated women to invest in a beautiful picture and spend hours each day wrapped in contemplation of it. Less frequently they betake themselves to the study of higher mathematics and the sciences, hoping by this means to bring forth a being of extraordinary intelligence. Some of her friends also predict with confidence the sex of the child according to the manner in which it is carried. When labor begins she is deluged with suggestions as to the position she should assume. If she extends her arms above her head she is at once told to lower them, as such a position will knot the cord around the neck of the baby and produce its death. If her pains are very severe, and the attending physician advises the use of chloroform, the patient, if a multipara, will probably demur, saying that Dr. So-and-So told her that if ever under any circumstances she took chloroform it would kill her. If the patient does not object some of the neighboring women will "chip in," saying that it is not right to give it; that it is flying in the face of Providence, who said unto the woman: "I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children."

No labor is without some pain; but in many cases the pain is easily bearable. The ability to bear and to feel pain varies with the individual. I have delivered women who made no outcry and seemed to suffer a minimum of pain. They did not wish to take chloroform, and as there seemed to be but little suffering I did not insist upon its use. I think it is the duty of every doctor to rob the lying-in chamber of all the agony possible. It is a cruel and disgraceful thing for him to sit and listen unmoved to the agonizing cries of a woman in this the most critical time of her existence when he has the power to safely and easily relieve her. With little effort on his part the lying-in room can be made very much less terrible to the prospective mother, and the frequency of abortions and conjugal onanism thus indirectly diminished.

In the first stage the pain can be greatly mitigated by the use of chloral hydrate and the hypodermic administration of morphine. Fifteen-grain doses of chloral given every half-hour until three doses have been taken produces sleep, and after this the pain sets in with renewed vigor. A full dose of morphine may also be given. It quiets the pain for some hours, but when its effects die out the pains are stronger and more efficient.

In the second stage the analgesic *par excellence* is chloroform. No one now contends that its use in the lying-in room is dangerous. The

objections to it are untenable and are things of the past. I have been unable to find a single well-authenticated case of a death occurring from its use under such circumstances. There remain but two objections to its use, viz., that it retards labor, and that it favors *post-partum* hemorrhage. We must remember that in the exhibition of chloroform in labor the object is not surgical anesthesia, but merely to obtund and take the cutting edge off the pain. The uterus is composed of unstripped muscular fibers, which would continue to act even if the anesthetic were pushed to the surgical degree. No doctor has failed to observe that labor pains cease for a time after his entrance into the lying-in room, but after a while they begin as before. Such a retardation may occur when chloroform is given, but it is of short duration, and if it is given properly the patient will soon begin to add voluntary effort when she finds they are less painful than before. By giving it properly I mean that it should never be pushed to the surgical degree, except during operation or when the head is crowding. Its use in the latter instance is important, as it enables the accoucheur to control the advance of the presenting part, deliver it in the interval of a pain, and thus diminish the danger of laceration of the external structures.

In regard to chloroform favoring *post-partum* hemorrhage, I have never seen a case that could properly be attributed to its use. In quite a large experience the only cases of *post-partum* hemorrhage I have seen have been the result of long and fruitless efforts on the part of the mother, resulting in a complete fagging out of the uterus and necessitating artificial aid. None have resulted fatally.

When the child is born and the doctor is preparing to cut the cord he is sometimes interrupted and told he must cut the cord longer, as the length of the penis at maturity depends on the length the cord is cut. I have never been able to verify or refute this idea, as the oldest male I have ever delivered is only thirteen. I may make a continued report on the subject, or perhaps some of the older members of the Society can enlighten us. Old nurses insist on burning the afterbirth to avoid the occurrence of after-pains. To facilitate the passage of the placenta the patient is told to blow into a bottle or her closed hands or to take snuff.

Too early efforts to deliver the placenta are objectionable; and the practice of Crede's method of expression at the expiration of fifteen minutes does great harm, frequently resulting in retention of a part of the membranes and in cupping of the uterus. It is natural that the

uterus should rest after its long labor, and the placenta will be extruded ordinarily when this has taken place.

I wish now to speak of an obstetrical superstition the observance of which has cost numberless lives and desolated many homes. It is the fancied superiority of the old comfort as an absorbent of liquor amnii, blood, urine, etc. The older, dirtier, and the more often it has served in a similar capacity the more highly it is prized. It is astonishing into what otherwise fastidious households the old comfort has penetrated. Fortunately the observance of aseptic rules is greatly diminishing its sphere of harm-doing, but it is still fearfully popular. It is the duty of all physicians to aid in its complete abolition. The means of so doing are in reach of all. The only materials necessary for aseptic pad being a yard or so of cotton to make a bag, and bran or sawdust with which to fill it. A little absorbent cotton or oakum should supplant the so-called clean rags used to catch the lochial discharge. We will all hail the day when puerperal fever is universally considered (as it is by an eminent French physician) the commission of a felony. The public has generally regarded it an unavoidable disease. If the falsity of any theory has ever been proved it has been this. When such a case occurs we will not be wrong in pronouncing it a plain case of criminal carelessness.

Another pernicious superstition is the idea that as soon as the baby is dressed it needs something in the way of nourishment. The articles selected are usually fat bacon, a sugar teat, whisky and water, or some variety of tea. The sooner such ideas are done away with the better for the future crop of infants. Then we will see a diminution in the prevalence of digestive disturbances in babies. It should not be given any thing, but after a while put to the breast, and then wait for the secretion of the mother's milk, which will take place before it succumbs to starvation.

There are many other superstitions relating to the child. For instance, it is considered highly improper to take it down stairs before taking it up. Its nails are to be bitten off, for if they are cut off the child will be a thief, etc., *ad nauseam*. The mother must stay in bed for nine days and eat nothing but toast and tea. She was formerly starved. Now she is allowed to eat any thing she chooses in reason and is kept in bed if she has had a hard labor for from two to three weeks. Those of her sisters who get up very early age much quicker, as witness the North American Indians.

LOUISVILLE.

HIP-JOINT DISEASE AND ITS MODERN TREATMENT.*

BY S. L. M'CURDY, M. D.

Hip-joint disease, technically known as morbus coxarius, coxalgia, coxo-tuberculosis, etc., is a tubercular disease of the hip. The primary focus is generally found in the head of the femur, although it may be found in the neck, greater trochanter, acetabulum, ligamentum teres, or capsular ligament. It may also be, and is in about seven per cent of cases, primarily a synovitis. In children osteitis is more frequent; and in adults synovitis is more frequent as a primary affection. It is generally single, although a secondary focus may appear on the opposite side, and Ridlon has reported fourteen cases of double hip disease. It is also a fact that about two thirds of cases are in the left hip. Age, sex, and heredity are important etiological factors, and have much to do with the production of the disease.

It is distinctively a disease of childhood, the majority of cases occurring between the ages of two and thirteen; although cases of true hip disease have developed *in utero*, and also appeared in patients over sixty years of age. Eighty-four per cent of cases occur before the age of fourteen years. Primary hip disease, however, is not common after twenty-five years. Relapses occur more frequently from thirty to forty years. Males are more frequently the victims of hip disease, because they are more active and more liable to injuries. Barwell says that phimosis is present in ninety-five per cent of cases; and the admission that genital irritation may produce reflex symptoms resembling hip disease would also account for the greater number of males than females.

Heredity plays a most important part in the production of the disease. Indeed, I may say that it is rare that a hereditary history can not be traced. Gibney, in two hundred and sixty-five cases, found but one that did not show a history of tuberculosis. Senn has called attention to the fact that the more severe tubercular diseases affecting bones are the result of slight injuries. In other words, it would be better for one of these tubercular children to receive a fracture than a slight contusion, although slight injuries are harmless in children with health at a high ebb.

The symptoms as they generally appear are as follows: Night cries in the early part of the night, which are only heard during sleep; limp

*Read before the Alleghany County (W. Va.) Medical Society, December 17, 1895.

in the morning, which passes off in the early stage as exercise is taken; fretfulness and slight constitutional deterioration, all of which increase as the fever advances; fever, which may generally be found during the evening, is seldom 100° F., and in the majority of cases only lasts from one to three hours.

Stiffness of the joint is always present as one of the earlier as well as later symptoms, and is due to muscular spasm. A joint in tuberculosis is more or less sensitive. The vibratory impulses imparted to it increase the pain, and the rigidity of the muscles is an effort on the part of nature to afford protection. The reflex muscular spasm of all muscles which have to do with the movements of the affected joint soon induces atrophy, and this symptom may be found as early as one week after the onset of the disease, and even before many of the other symptoms have been observed. This can be detected by circumferential measurement of the thighs, and can be seen by the disappearance of the gluteal fold and dimple and flattening of the buttock. In females, the vulva is lower on the affected side than on the other side. A tilting of the pelvis is observed quite early, due to a fixed condition of the thigh upon the pelvis, and is known as flexion. Associated with this may be found in the early stage, or stage of apparent lengthening, abduction, which is succeeded by adduction later on, or when the product of tuberculosis escapes from the joint bag, or from the bone into the surrounding tissue. When the foot is in abduction the toe is generally everted, and when it is in adduction it is inverted. Glandular enlargement may be found quite early, and is a forerunner of abscess formation. A doughy or brawny feel about the joint is imparted to the touch. Pain, which in rare cases is never found, is in the majority of cases referred to the knee, and it means that the primary focus is in the femur. In cases of suspected hip disease, if the pain is in the joint or sacrum, there is more likely to be synovitis or pelvic disease.

In making an examination the patient should be stripped, and inspection be made while he is standing and walking. Lay the patient down on a table and freely move the well leg, following this by gentle manipulation of the suspected extremity. Never use an anesthetic as a method of making a diagnosis, for severe manipulation of a tubercular joint does great damage, and, to my notion, is as heroic as an exploratory incision in suspected abdominal disease, and does far more damage. The so-called "grating" looked for is rarely if ever present. Thomas' test is quite diagnostic. In moving about, in the sitting or

reclining position, the patient carries the diseased member upon the well one, and when lying still natural traction is practiced by the patient pressing the toes of the well foot upon the dorsum of the foot of the affected side.

The differential diagnosis must be made from lumbar Pott's disease, synovitis proper of hip, infantile spinal paralysis, sacro-iliac disease, congenital dislocation of the hip, disease of the knee, and hysterical affections. Abdominal abscesses and diseases which press upon the psoas or iliac muscles may cause limited motion of the joint and confuse one.

At this point I desire to call your attention to the difference between stiffness or rigidity of a joint and limited motion. The former term means restricted motion in all directions, and in the latter motion may be limited in but one direction, the joint being freely movable in all other directions. Hip-joint disease is self-limited, and spontaneous recovery with bone deformity is generally the result. The earlier the patient is put upon treatment the more rapid the course is run, and the less the deformity, and *vice versa*. It is more fatal after puberty. About 50 per cent of cases have abscesses; 34 per cent of suppurating cases die; about 7 per cent of non-suppurating cases succumb to the disease, the average mortality being about 16 per cent.

Causes of death may be enumerated as follows: Pulmonary tuberculosis, 8 per cent; meningitis, 16 per cent; kidney complication, 20 per cent; operations, 10 per cent; exhaustion from suppuration, pyemia, septicemia, etc., 14 per cent. Under good treatment cases are under the surgeon's care from one to four years; with no treatment they run their course in from three to ten years. The average shortening after excision is from one to three inches; after mechanical treatment, one fourth to one and three fourths; and with no treatment, from one to five inches. As a temporary or transient deformity we may have abduction, adduction, flexion, eversion, and lordosis, due to muscular spasm. The deformity may be permanent, due to true or false ankylosis, dislocation, true or false, and resultant shortening, real or apparent.

Treatment may be divided into hygienic, medical, mechanical, and operative. Under the first head pure air is recommended, generous diet, sufficient sleep, including an afternoon nap or rest.

Tonic and specific medication are important and should be given in the majority of cases.

Mechanical treatment not only prevents deformity and reduces the

length of time these cases are under observation, but it also reduces the mortality rate. It is claimed, and very correctly too, that vigorous mechanical treatment carried out on correct lines prevents abscess formation. Statistics show that with abscess the death-rate is 34 per cent, and without, 7 per cent. When these facts are considered, proper mechanical treatment becomes of the greatest importance.

Mechanical treatment may be considered under the following subdivisions: Recumbency, fixation, or the English method, and traction, or the American method, and the combination of the American and English, or fixation and traction.

The prime object in treatment is to relieve the symptoms and prevent deformity.

As these patients place the toes of their well foot upon the dorsum of the foot of the affected side to relieve pain by traction, they give a forcible hint that traction, to overcome the spasmodic contraction of the muscles about the joint and thus relieve interarticular pressure, is the first principle of mechanical treatment.

Next to traction, by way of suggestions made by the patient, they demand protection. In recumbency the principles of treatment, viz., traction, protection, and immobilization, are carried out by the use of the wire cuirass of Bauer, the stretcher bed, plaster-of-paris, spica, the weight and pulley extension as first described by Gurdon Buck. During the early stage, or during the more acute inflammatory changes, the bed treatment is preferable, in that it offers complete rest to the hypersensitive joint. Night cries and other evidences of constitutional degeneration are magnified without treatment, or when proper treatment is not applied, and improve under treatment. In some cases when mechanical treatment is properly applied the various stages of the disease come and go in comparative comfort, and recovery takes place with little or no shortening, and practically a perfect joint.

As soon as muscular spasm yields to treatment and the patient becomes more comfortable, ambulatory treatment must take the place of the bed treatment. While confinement in bed, or the rest cure, if you please, is beneficial, there is a time when the vital forces begin to degenerate, and exercise must be given the patient in order that the molecular disintegration which is going on in the hip may be succeeded by a progressive metamorphosis rather than degeneration.

Except in very acute cases, where pain and constitutional disturbances are excessive, the mechanical treatment, as accepted by the mem-

bers of the American Orthopedic Association, is the American method of traction, and upon this one principle all are agreed, with possibly one or two exceptions. No one objects to fixation in the early stage, but some say it is unnecessary subsequent to the acute stage; while others adopt the ambulatory treatment from the beginning, thus teaching that these patients should never be confined to bed.

Fixation is best carried on by the use of the Thomas hip splint, which is more easily applied than plaster-of-paris, more economical than the leather splint of Vance, the metal splint of Willard, or the Blanchard brace. Traction alone is best carried out by the polyclinic splint, and its numerous predecessors known as the Davis, the Sayre, the Taylor, the Andrews, and the Judson splints.

Treatment of to-day, as would then appear, is fixation and traction. Up to the time of the introduction of the Phelps no brace combined these two indications in an ambulatory splint. Since that time Bradford and Lovett have so modified the Thomas as to make it a walking crutch and also afford traction. The Phelps affords fixation and traction with protection, but these are principles in the brace which can not be altered. In order that fixation can be used with traction when and as long as desired and discarded at will, without in any way interfering with the traction, the splint shown was devised. It is a polyclinic without the posterior bar, and a Thomas-polyclinic with it. It is adjusted with two screws and can be removed when desired. It is also a walking crutch. About fifty per cent of cases do not use crutches. It is advisable, however, to use crutches in all cases, and if the patient learns to walk without them, and at the same time sufficient traction is maintained to relieve pain and prevent shortening, he should be allowed to do so.

The management of the abscess of hip-joint disease is one that is still under discussion. The general surgeon excises all abscesses, and has as his first principle of treatment the removal of a tubercular focus, no matter where found. On the other hand, the mechanical surgeon or orthopedic practices conservatism, never opens an abscess, and does not even aspirate. Between these two extremes the orthopedic surgeon's aim is to adopt a course of treatment which allows him to excise and curette when necessary, and to leave alone when the cases are running a harmless course.

The injection of abscesses, after aspiration, with a ten-per-cent solution of iodoform and glycerine, as advised by Senn, is good treatment.

It is claimed for this treatment that it not only relieves pain, but the iodoform destroys the bacilli.

What may be given as guides for excision of these abscesses are, when they enlarge rapidly, associated with great pain, are burrowing and producing pressure upon other important structures, or are attended with marked sepsis.

When an abscess appears upon the surface as a tumefaction merely, with no other evidence that it is an abscess than that it is associated with hip-joint disease, to excise and subject the patient to further danger of pyogenic infection, would be any thing but good treatment.

It is not an easy matter to say just when to discard the brace in the treatment of hip disease. Schaffer has written extensively upon this subject. No rules can be given, but the surgeon must be guided by the patient's condition and the presence or absence of symptoms.

ENDOMETRITIS.*

BY J. D. HAMILTON, B. S., M. D.

Taking into consideration the frequency with which we are called upon to treat this disease, and the differences of opinion as to the proper treatment to be used, I feel that I can not spend the time allotted me upon this occasion better than by giving you a brief rehash on endometritis.

When I call to mind the formation of the mucous membranes lining the uterus and its glands, and that the glands are surrounded by lymph spaces which communicate freely with the lymph spaces which surround the muscular fibers, I am inclined to believe endometritis and metritis to be practically one and the same disease (one leading to the other sooner or later).

While it is true exposure to cold may be the exciting cause of this disease, it is always due to some one of the pathogenic micro-organisms. It is produced by the streptococcus, staphylococcus, bacillus tuberculosis, bacillus coli communis, and gonococcus. The streptococcus is said to get in its work during the puerperal period, and its effects are always acute in character and results. But as we have already heard an able

* Read before the Meade County Medical Society, July, 1895.

paper on this especial disease, I will confine this paper to chronic inflammation produced by the other pathogenic germs.

It has been demonstrated by *post-mortem* examinations that about 10 or 12 per cent of the cases of inflammation of the uterus and tubes are caused by the bacillus tuberculosis; about 85 per cent by the staphylococcus and gonococcus; and occasionally the bacillus coli communis is found to be the cause.

You are all familiar with the variety of ways by which these germs may find access to the uterus from vagina, and recognize the ease with which infection of the uterine mucosa may take place, and the subsequent suffering to the woman who is so unfortunate. My object in referring to these facts, so well known to you all, is to more forcibly impress upon your minds the great importance of treating every case in the light of modern surgery, doing every thing in your power to prevent infection, and by radical or thorough treatment prevent serious complications. I will add, in this connection, that I am inclined to believe every physician who does not do every thing in his power to prevent infection in cases under his care should be held criminally guilty; and I am inclined to believe his career will not be marked with success, nor is he worthy of the confidence or love of any woman.

It would seem to be established that in all cases of endometritis the inflammation may extend from the uterus to the fallopian tubes, and hence produce salpingitis, ovaritis, or peritonitis. In view of this fact, I can not see how any physician can content himself with giving uterine tonics and making applications of iodine or carbolic acid to the external os for weeks, or even months; nor excuse himself for subjecting his patient to the suffering of repeated use of the dull curette, followed with imperfect application of iodoform, with insufficient drainage, when it has been fully demonstrated by men of ability and experience that this is simply temporizing and loss of time.

Every uterus that we are called upon to treat, and find it discharging pus, should be treated as thoroughly as any other pus cavity. It is best to give an anesthetic, but the treatment can be carried on without it.

First, thoroughly wash out vagina with soap and water, then cleanse the vagina and cervix with a sublimate solution, 1 to 3,000.

Steady the uterus with the vulsella; dilate os with the bivalve dilator (better than sound). Having sufficiently dilated, wash out the uterus with sterilized water through a double uterine catheter.

You will now proceed to remove the entire endometrium. The application should be through, going down to the submucous connective tissue. Some form of the sharp curette must be used. (The dull curette would be worthless.) Now use an intra-uterine douche of sterilized water; then inject the uterus with pure tincture iodine, and loosely pack the uterus with iodoform gauze. This keeps the endometrium in contact with the iodoform and produces necessary drainage. The operator can judge how often to change the gauze.

I look after the digestion, correct errors in diet, and overcome constipation when present.

Ordinary cases of endometritis treated in this way will be cured in from one to two months if reinfection is prevented. I will add that if the microscope reveals the cause to be the presence of the bacillus tuberculosis, hysterectomy is indicated. It is the only treatment that will cure your patient and prevent the bacillus invading the peritoneum and producing a tuberculous peritonitis.

GRAHAMTON, KY.

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, January 10, 1896, Dr. W. L. Rodman, President, in the chair.

Exhibition of Pathological Specimens. Dr. L. S. McMurtry: I desire to present for examination two exceptionally interesting specimens of fibroid tumors of the uterus. Both were removed by abdominal section during the past ten days, and especially in their relations to the uterus were unique. The first tumor is the typical myofibroma, and was attached by a broad, thin pedicle to the fundus of the uterus. It will be observed that the tumor is in two large lobes, and occupied the entire pelvic basin, and the superior border almost touched the stomach. The uterus and its appendages seemed otherwise perfectly normal, and gave no evidence of interstitial fibroid deposits. I enucleated the tumor from the fundus uteri, secured the vessels by deep silk sutures, and sewed the peritoneum over. The abdomen was closed without drainage, and the patient has passed into convalescence without any

* Stenographically reported by John Cashin, M. D., Louisville, Ky.

untoward symptoms whatever. I carefully examined the uterus and appendages in this case before deciding to deal with the tumor in this manner. The patient is a young unmarried woman, and by this operation is relieved of the tumor and retains the uterus and its adnexa intact.

The second tumor is an excellent illustration of the same character of growth with some unusual complications. The patient is a vigorous married woman, thirty years of age, and sterile. The general appearance of the patient and the conformation of the abdomen were suggestive of a huge ovarian cyst. Upon close inspection, however, with palpation, the distinct outline of a cyst was absent. The abdomen fluctuated and presented in general the symptoms of ovarian cystoma. An examination of the specimen shows the tumor to be a large fibrocystic tumor of the uterus. The tumor was in the beginning a fibromyoma, and afterward underwent cystic degeneration. The abdomen contained fully two gallons of ascitic fluid. The intestinal adhesions of the tumor were very extensive and presented much difficulty in the course of the operation. The vitality of the growth was maintained by very slight vascular connection to the anterior surface of the body of the uterus, which resulted in the degenerative changes in the tumor. It was attached by very circumscribed union to the anterior surface of the body of the uterus, and had no pedicle. It was very easily detached from the uterine surface, and a few buried sutures secured the severed vessels which entered the tumor from the uterine wall. I sewed the peritoneum carefully over at this point, and brought the uterus forward, attached it to the parietal peritoneum and fascia with a single suture, and packed a piece of gauze upon the surface whence the growth was removed. Both ovaries in this case were cystic, and I removed the appendages on both sides. This tumor evidently began its life as a subperitoneal myofibroma and grew to very large dimensions with a very small and superficial attachment to the uterine surface. The patient has done well and is already safely convalescent.

It will be observed that in both of these cases I succeeded in removing large fibroid tumors from the uterus without mutilating that organ, and in one instance without removing the uterine appendages. The operation was quite practicable in this way, and was justified by the otherwise healthy condition of the uterine tissues. Both women are young, and I am confident that the results will be thoroughly satisfactory. Both operations are illustrative of what I conceive to be true conservative surgery.

There is no more interesting chapter in modern surgery than that relating to the operative treatment of myofibroma of the uterus. The evolution of the surgical treatment of these growths has been quite rapid and has dissipated many fallacies which long obtained in the professional mind regarding these tumors. Because they are not of malignant character they were pronounced harmless for a long time, and the patients left to hemorrhage, suffering from pressure, and in many cases prolonged invalidism and death. Such large tumors as these here presented render a woman's life that of misery and suffering; and when degenerative changes take place death often is the termination after prolonged illness and pain. For a long period after Keith demonstrated that these growths could be removed with reasonable safety by surgery the results of operation were most discouraging. With improved technique and increasing skill and knowledge in dealing with intraperitoneal structures results have steadily improved, until now these tumors are removed with equal facility and equally low mortality as are ovarian tumors.

Presentation of Clinical Cases. Dr. A. M. Cartledge: I first saw this gentleman about four weeks ago; he is thirty-four years of age; he came to consult me, on the recommendation of his physician, for a malignant growth of the palate and superior maxillary bone. The history was, that last August his upper jaw had been hurting him some time; he had a tooth extracted, and from the socket of this tooth there soon presented a growth which extended to the pillars of the soft palate and to the tonsil. I told the patient that if he was willing to take the chances I would try a very radical operation upon him. Last Friday, a week ago to-day, the operation was done. The first step was ligation of the common carotid artery. This was done rapidly through a one and one fourth inch incision. Then I did a tracheotomy, and packed the pharynx with a tampon. I removed the superior maxilla and as much of the palate bone as possible, together with the tonsil of that side. The only ligature required after tying the common carotid was placed around the infra-orbital artery. He went off the table with a pulse of 88. The pulse went up to 128 that night. The tracheotomy tube was taken out on the evening of the same day the operation was done. He has had no trouble except a little ophthalmia, which I take it was due to the interference with the orbital plate of the superior maxillary bone. The large cavity left after the operation has never

suppurated a particle. It was packed with iodoform gauze which was allowed to remain three days. The highest temperature after the operation, except during reaction, was 98.5°. The stitches were taken out yesterday. The wound was stitched with continuous catgut and united by first intention.

Discussion. Dr. J. M. Ray: I am very much interested in malignant disease involving the mouth and throat. I have seen a number of these cases, and the surgeons, as a rule, have discouraged operative interference.

Dr. S. G. Dabney: I want to express my thanks to Dr. Cartledge for the pleasure of seeing the operation, and to congratulate him on having the patient here to-night, a week after the operation.

Dr. A. M. Vance: I think the main question here is as to the final outcome. I congratulate Dr. Cartledge on the brilliancy of the primary result of the operation. I have never excised the superior maxillary bone, not having had a case come under my care where I thought it possible to remove the diseased tissue entirely. The rule is, I think, that the vast majority of these cases recur within six months or a year, and I question the advisability of operating for malignant disease of the upper jaw, owing to the danger of the operation itself, and the fact that you stimulate the growth of these tumors if they are not entirely removed.

Dr. W. L. Rodman: This is a very interesting case to me. I certainly feel like adding my compliments to the others that have been extended to Dr. Cartledge for his favorable result. As much as I admire this, I must agree with Dr. Vance that this case was not an operable one. Statistics show very clearly that the primary mortality after operations of this kind is 33 per cent. It is further shown that a very large percentage of tumors of the upper and lower jaw are malignant. In 1891 I read a paper on Tumors of the Upper and Lower Jaw, and quoted statistics showing that 75 per cent of tumors of the upper, and 76.4 per cent of the lower jaw are malignant. Butlin makes the statement that there is a mortality of 33 per cent from the operation itself; and there is no single incontestible case where the patient survived three years.

As to primary ligation of the common carotid, I have never seen this done, and I do not believe it is necessary. Neither do I think preliminary tracheotomy is required. I have seen the operation done in the Trendelenberg position, and in this position it is better to dispense with the preliminary tracheotomy. I believe there will be a speedy

recurrence; still this does not lessen the interest in the case and the beauty of the surgical technique.

Dr. Cartledge: I appreciate the force of the criticism that has been offered on this case. I do not agree that the ultimate result in these cases is always bad. It is not fair to apply to cases operated upon at the present day statistics of former years. This is shown in operations on the breast. And, applying the same process of reasoning to cases like this, I do not see why we can not hold out better prospects to them. It seems to me that a man of his age could stand almost any operation that offered a chance of getting rid of this tumor. The rapid growth and absence of lymphatic enlargement point to its sarcomatous nature.

I believe the Trendelenberg position has done a great deal to obviate the necessity for tracheotomy. Ligation of the common carotid artery does not materially lengthen the operation, requiring only two minutes and ten seconds, and totally eliminates the danger of blood getting into the trachea, and does not add any thing to the danger of the operation. Many of these cases that are said to die of pneumonia really die from infection beginning in a clot in the bronchi. The hemorrhage in these cases is very severe; as we should expect, there is a great deal of retro-hemorrhage. In removing the tonsil, a part of the pharynx, and the palate bone, ligation of the common carotid seems not only justifiable but a necessity; of course such is not the case in removal of the superior maxilla.

If there was any thing in this operation that impressed me, it was the advisability of preliminary tracheotomy. I believe that it adds nothing to the danger of the operation, and that it should be practiced in nearly all cases.

Dr. T. S. Bullock presented a case of congenital deformity of the external ear, and asked the opinion of the Society as to the advisability of further operative interference. The external auditory canal was completely occluded, except a small pin-hole opening through which a little cerumen escaped. An operation had been made in the hope of

There seems to be congenital occlusion of the bony portion of the auditory canal, and any attempt to make an auditory canal there would be a failure. The only form of procedure that I could suggest would be an effort to make an external ear. Possibly the whole temporal bone is deficient, and therefore to open an auditory canal and make a sound transmitter is out of the question.

Dr. Dabney: I agree with Dr. Ray that it would be exceedingly difficult to open up the auditory canal in such a case. All the parts are poorly developed, and the most to be expected would be to improve the appearance by turning the external ear back. Dr. Bullock has been successful in this to a certain extent.

Dr. Vance: This is a piece of bone removed from the skull of a young man twenty-five years of age. He was unable to give any history of himself, but I learned that about five years ago he received a blow over the left eye. Three years after this he had attacks of Jacksonian epilepsy, and, later, paralysis of the right side. He had intolerable headache; was sleepless and irrational at times. The question of where to operate came up, and I determined to operate forward. There was slight evidence of depression. I used the bone-flap operation and removed this piece of bone without any great difficulty. Immediately the dura protruded beyond the surface of the scalp. The bone was closely adherent to the dura, and over the surface of the brain itself there was a coating of a dark, slimy material. This was scraped off and part of the brain substance removed with it. I felt it inadvisable to replace the bone after the dura had bulged out, but simply stitched the scalp over the bulging brain. The headache was relieved at once. Power in the hand has perceptibly increased. He answers questions intelligently, and remembers many events in his past life. At the first dressing the dura was very much less prominent, and at the third dressing there was no protrusion at all, but a depression beneath the surface of the cranium.

Discussion. Dr. Cartledge: The case appeared to me, before the operation, to indicate rather diffuse cortical irritation. From the history it seemed to me like a case of fracture of the internal table, and

Discussion. Dr. H. A. Cottell: I have been highly entertained by the paper. It is of value not only as a resumé of the many superstitions of the obstetric-room, but also for the obstetric science which it contains. I have done considerable obstetric practice in my day and have heard many of the obstetric superstitions mentioned by the essayist. I could add but few to the list. There is one that is usually set down as a superstition in which there seems to be some reason, that is, the burning of a hole in the compress which is applied to the cord. I always burn the hole when asked to dress the cord, and do it with ceremony. There is a scientific reason for the seeming superstition. It was a long time ago a matter of observation that cords dressed in this way were less liable to have suppuration at the base. That is, the burning renders the dressing aseptic.

Another superstition not mentioned by the essayist is, that the doctor by looking at the placenta can tell whether or not the woman will bear more children. I have met with patients who refused chloroform for the reason that the Creator, as a punishment for the first sin, declared that woman should bring forth children in pain.

Regarding the scientific features of anesthesia during labor, I think that chloroform favors hemorrhage. It has been said that chloroform never kills women in labor, but there have been fatal cases reported, and I came very near having one myself last winter. I was called to a case and found the woman well advanced in labor. She was screaming for relief, and I intrusted the chloroform to the most incompetent nurse I ever saw. She crowded it while I was engaged with the delivery, and the patient ceased to breathe. Fortunately under artificial respiration she began to breathe in a short time. To add to the difficulty the child was still-born, and there was great *post-partum* hemorrhage. I finally succeeded in getting the hemorrhage stopped and the child and woman to breathing, and all ended well.

Among a certain class of people it is the practice for women who have nursing children of varying ages to put the new-born infant to their breasts. This of course is pernicious, being a fruitful source of indigestion in children so treated.

Dr. F. C. Wilson: I was very much interested in Dr. Bullock's remarks on obstetric superstitions. Among others which I have encountered is the belief that the liability to wrapping of the cord around the neck is increased if the hands be raised above the head. Many of us have encountered cases that would seem to lend probability to this.

I can recall one instance where the life of the child was sacrificed by the encircling of the cord three times around the neck. This was ascribed by the woman to the fact that three weeks before she had house moved and had herself hung several pictures. Shortly afterward she had noticed violent movements of the child, then all became still. I was called to see her, and failing to hear the fetal heart sounds gave my opinion that the child was dead. She was delivered three weeks later of a partially decomposed child with the cord tightly wrapped around the neck three times. The neck was so constricted that it was not larger than my wrist.

Dr. Cartledge: A superstition that we all meet is that the eyes of the child must be washed with milk immediately after birth. This is a widespread practice, and it seems to me is a very pernicious one.

Dr. Ray: I want to ask a question bearing upon ophthalmia in infants. The first pus that comes from the eye in a new-born infant is of a dark-yellow color and stains deeply. It soon becomes lighter.

Dr. Cottell: I arise merely to say that I do not know the cause of the yellow pus, but I have a theory. It may be due to hypersecretion of the meibomian glands, which is yellow.

Dr. Cartledge: If Dr. Ray would have a culture made with pus from a few of these cases he might find as the cause of it some bacterium. Pus in infections by *staphylococcus aureus* has a deep yellow color.

Dr. Bullock (closing the discussion): The position I take is, that in many cases of labor there is a minimum of pain, and chloroform is not required. If there is any thing fairly well established in medicine it is that in the lying-in room chloroform is free from danger, the patients seeming to be buoyed up by the inspiration born of the occasion. I have heard of the reported cases of death, but they are not authentic. I took pains to state in my paper that surgical anesthesia is not to be attempted; the analgesic and not the anesthetic effect being the one to be obtained. I do not see how chloroform can produce *post-partum* hemorrhage. Chloroform is most often given in tedious labors, and then a rapid emptying of the uterus follows. This rapid emptying of the uterus and not the chloroform is responsible for the hemorrhage.

JOHN L. HOWARD, *Secretary.*

Foreign Correspondence.

LONDON LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

Cromwell's Skull; Rabies; Progress of Cremation; Pott's Fracture Treated by Early Movement, Massage, and Strapping; Burning of a Smallpox Hospital; Case of Chronic Cancer; Seventy-seventh Anniversary of Hunterian Society; The New Medical Register, etc.

A short time ago a deputation of five or six members of the British Phrenological Association paid a visit to Mr. H. Wilkinson, of Seven Oaks, for the purpose of examining the head which has been in the possession of his family for three generations, and which is reputed to be the head of Oliver Cromwell, and the results of the examination have been communicated to the society. Contrary to his usual rule not to allow visitors to touch the head, Mr. Wilkinson permitted the deputation to examine it in the customary phrenological manner. Measured not with the callipers, but with a tape, the circumference of the mummy head is $21\frac{7}{8}$ inches, and allowing for the shrinkage of the flesh the size during life would not be less than 23 inches. The anterior measurement from the ear over the front was $11\frac{3}{4}$ inches, and the posterior measurement from the same point backward was $10\frac{1}{2}$ inches. The height of the head from the ear was $13\frac{5}{8}$ inches. Besides great size, the head possessed wonderful evenness and fineness, and it was high and very broad.

The London County Council have adopted the recommendation of their Public Control Committee, that a muzzling order for dogs be passed for the metropolis. During January it appears that twenty-five cases of rabies have been detected, a figure which exceeds by eighteen the largest number that occurred in any month of last year. The muzzling order has been for some time past in force in the counties of Surrey and Middlesex.

Cremation makes but slow progress, only one hundred and twenty-five bodies having been subjected to the process at Woking. In 1885 there were but three cremations recorded.

Mr. Noble Smith, F. R. C. S., recently fell and received a Pott's fracture, the fragments being separated by more than an inch. He determined to try early strapping, early movement, and massage; this treatment was attended with the happiest result. Within half an hour of the accident the foot and ankle were strapped before any appreciable swelling had taken place, and the ordinary black splint, supporting the foot, leg, and thigh, with side pieces, was applied. The strapping was lightly applied, with no attempt to

apply pressure, and was daily adjusted according to the tension. The strapping was discontinued on the seventh day. On the fourteenth day plaster-of-paris splints were put on. From the first very gentle movement of the ankle joint was submitted to. Avoiding disturbance of the fractured bones, massage was begun slightly during the first week and increased by degrees. On the twenty-first day Mr. Smith could bear the weight of the body on the injured leg. On the twenty-third day he walked with caution. On the thirty-second day he could flex and extend the foot nearly as well as the sound one, and on the thirty-fourth day he gave up crutches, using instead two sticks. On the forty-second day he walked two miles with sticks.

A smallpox hospital which had recently been established at Oakridge, near Stroud, by the local authorities, was surrounded by a mob of several hundreds of persons, and in the presence of a number of constables, who were quite helpless, set fire to in various places and burned to the ground. Eventually several arrests were made, and several terms of twelve months imprisonment have been inflicted.

It has been decided by the military authorities to provide glow-lamps with pocket batteries for use on the battle-field by the members of the ambulance corps, in place of the old-fashioned lanterns.

Mr. Hankin, the government bacteriologist at Agra, is reported to have used with success some prepared serum for the treatment of snake-bite, which he had received from the Pasteur Institute. A native bitten by a cobra was cured, and a number of sheep poisoned with snake venom recovered after being treated with M. Calmette's prepared serum.

Mr. Davies-Colley has drawn attention to the fact that gonorrheal rheumatism is sometimes the cause of non-suppurative ankylosis of joints, the ossific process involving mainly the ligaments. Mr. Colley has recently seen two cases of this kind in which during the progress of the case there was a marked history of gonorrhea.

At the Clinical Society of London Mr. T. W. Nunn read notes of a case of chronic cancer of the breast of more than thirty years' duration. The patient first presented herself as an out-patient of the Middlesex Hospital when she was thirty-seven years of age. There was a scirrhus humor of the right breast, the axillary glands also being involved. The breast was removed in 1862. In 1866 pains were complained of in the muscles of the arm, but these passed off. In 1878, upon examination, a slight return of the cancerous mischief was found at the upper border of the cicatrix. The patient was not seen again by Mr. Nunn until 1893, when he found there to be an increase in the cancer deposits which were in the form of flat, vein-marked plaques, the arms being somewhat swollen. Under treatment the swelling of the arms disappeared. In 1895 the woman was energetic and working as a charwoman. In connection with the above case Mr. Howard Marsh mentioned a case of a female, now seventy-one years of age, who had had carcinoma of the breast continuously for eighteen years, he having recently performed the tenth operation on her.

The seventy-seventh anniversary dinner of the Hunterian Society of London was held on February 14th, and passed off most successfully. Prof. Clifford Allbutt remarked that Hunter, like many leaders of British thought, had achieved success without any thing like academic training, he being a pioneer who threw himself with brute force into the work. Now not only must the pioneering spirit be present, but there must be first of all a long academic training.

The Medical Register for 1896, which has just appeared, contains 33,601 names. The number of qualified men added during the past year was 1,446, a number slightly below the average for the last five years. There were 538 names removed during the year on account of death. Only one name was struck off the register under the penal powers possessed by the General Medical Council.

Dr. J. Squire considers that heredity is not so great a factor in predisposition to phthisis as is generally supposed, and that the two chief agents in conveying the infection are milk from tuberculous cows and the expectoration of consumptive patients. The prevention of phthisis does not rest solely with medical men, but requires the co-operation of the general public.

The Lines of Advance in Abdominal Surgery will be the subject of the next Hunterian Society lecture.

LONDON, February, 1896.

MISSED LABOR.—Stahl (*Der Frauenarzt*, October, 1885,) relates a case in which he feels sure that labor was missed, and where he afterward induced a kind of secondary "premature labor," as he terms it—or, in more usual terms, he delivered a fetus which the uterus refused to expel. The patient was intelligent. Her pelvis was contracted by prominence of the sacrum. Three labors had been normal, and only lasted some two hours each; a fourth had been more lingering, and a very big child was delivered at term. Labor pains, very distinct, set in at term in the fifth pregnancy. For three hours the uterine contractions were strong and regular; then the intervals grew longer and the pains weaker till they ceased. When 302 days had elapsed after the last period, Stahl found the patient inconvenienced by the great size of the abdomen, so he turned and delivered a very well-developed fetus, which was alive at the beginning of the delivery. The prominent sacrum gave great trouble; the perineum was badly torn, owing to the great size of the fetal head; ossification of the cranial bones had advanced very far, and made the parts incompressible. The

Translations.

A GLIMPSE OF THE LING SYSTEM.—(*Archives Cliniques de Bordeaux.*) In a letter to this magazine from Stockholm, Dr. Pierre Regnier describes his visit to the Institute of Gymnastics at which the Ling system of physical culture and therapeutics is taught. The institute prepares students in three lines of work: as teachers of the system, as physical trainers for the army, and as operators for the cure of disease. The system is such a unit that no division is made into the various departments; all take the same course, which is very comprehensive, one might almost say severe.

It consists of both theoretical and practical work in anatomy, physiology, hygiene, the mechanics of the various movements of the body and their physiological effects, with many hours of gymnasium work and practice in the clinic.

The students learn to know by actually experiencing them the feeling and effect of all the movements, both active and passive, and of the different kinds and degrees of massage. Three years are required to complete the course, but even then no one is allowed to practice the system for the cure of disease except under the direction of a physician.

Their treatment is applicable in more directions than one might suppose; besides the ordinary surgical cases of tumors, sprains, stiff joints, slight dissymmetries, etc., they treat in Sweden many disorders of the alimentary canal, of the heart, of the nervous system, and even some gynecological cases.

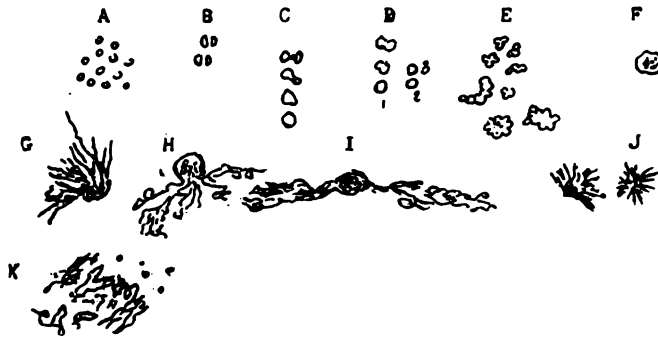
THE MICRO-ORGANISM OF CANCER.—(*Progrès Médical de Paris.*) Of late years investigators have by turns advocated and combated the microbe theory of cancer. Up to this time the micro-organism of these malignant tumors has not been satisfactorily demonstrated.

Dr. J. Braithwaite claims to have succeeded in recognizing in his sections a fungus which he believes to be the cause of cancer. His researches were conducted on six cases: cancer of the breast, of the external auditory canal (papilloma), epithelioma of the verge, cancer of the lip, and of the vagina. In these six cases he found the same micro-organism. In the mucous polyp and fibrous polyp of the uterus, on the contrary, the author found other fungi different from that of cancer, thus not conflicting with the theory of their infectious origin.

Dr. Braithwaite's method is as follows: He selects a piece from the center of the tumor whether it has been hardened in alcohol or not. If the cancer is one of the lip, a part of the border is included in the piece. A piece that happens to be too soft to be cut immediately is put into alcohol a few hours and is then cut into sections as thin as possible and dropped into

water. A few chosen sections are put upon a plate and dried by means of bibulous paper. Treating these with a few drops of a solution of caustic potassium, they are then covered to keep out dust, and allowed to stand until they are almost transparent, which will require from twenty minutes to three or four hours, according to their thickness. Without removing them from the plate, wash in a slightly acid solution. The fungus resists the action of the potassium better than the tissues, and can now be readily recognized under the microscope.

In all the cases examined by the author the same organism was revealed. It belongs to the class of fungi (champignons), and consists of a mycelium and spores. In cancer of the breast, especially, can the various phases of this parasite be studied.



There is first seen a mass of spores contained in a sac (F); then the envelope bursts and allows the filaments of the mycelium to escape (G H I.). At the end of twenty-four hours the mycelium disappears and only the spores are seen.

The life history seems to be as follows: Two spores approach one another (B); from one of them a process is thrown out which unites it to its neighbor (C); the two quickly join (D); attaching themselves to others again and again they form masses (E) which become covered with an envelope, forming the spore sac (F) which is found in the sections.

In the figure J is a spore sac undergoing dissolution, and K is the mycelium on the edge of a cancer of the lip.

ALUMNOL.—(*Journal de Médecine, Paris.*) Investigators do not agree as to the action and value of this product. Akoutz found the powder and a three-per-cent solution used as a wash very good in the treatment of vaginitis and endometritis; endometritis complicated with lesions of the appendages, on the contrary, was not benefited, but made worse if any thing. In the treatment of blenorragia Chotzen recommends it very highly, but Casper and Samter were not at all pleased with their results. Injections of a one-per-cent to two-per-cent solution were used in the first stages, afterward diluted to one fourth per cent to one per cent.

Abstracts and Selections.

HOW TO DIAGNOSTICATE SEXUAL DERANGEMENTS IN THE MALE.—Dr. Eugene Fuller, of New York, read a paper before the Mississippi Valley Medical Association 1895 Meeting, and endeavored to impress upon the profession the fact that in the majority of instances sexual derangements in the male were caused by pathological processes in or about the seminal vesicles, and, further, that they accomplished their results by interfering with the mechanism of ejaculation. He called attention also to the fact that this side of the question had been almost wholly neglected by preceding writers on sexual disorders, who had devoted themselves largely to psychological conditions in this connection, the result being that the great majority of the profession associated sexual disturbances with some radical mental defect. Sexual derangements in the male should be diagnostically arranged in four classes: (1) Those dependent on inflammation of the seminal vesicles. (2) Those dependent on neuroses. (3) Those dependent on primary mental disease or degeneration. (4) Those dependent on general malnutrition and debility. The order of this classification corresponded to the frequency with which these different forms of diseases were encountered in practice. In explanation of the first class of cases the writer stated that it was needless to go into details, since he had recently reviewed that subject very fully in a book.

Where inflammation of the seminal vesicles existed there was generally a previous history of urethral or bladder inflammation, sexual abuse, and the like, all of which were agents tending to produce localized inflammation in the seminal vesicles. The second class of causes either inhibited or excited the sexual center by means of reflex nervous action. The third class included the different forms of paranoia, in which the sexual sense existed in a perverted form. The fourth class was a small one. It included individuals, generally young or middle-aged, who made complaint that they were capable of little sexual exertion, and that feelings of prostration and exhaustion resulted whenever coitus was attempted.

The writer made some special remarks on the different appearances that the varying grades of inflammation of the seminal vesicles present to the sense of touch, and called attention to the fact that in cases of extensive adjacent inflammation involving both sacs an inexperienced examiner was likely to err in diagnosis, mistaking the condition for hypertrophy or inflammation of the prostate. The author held that to become perfected in the feel of the seminal vesicles the finger needed as much practice as that of the gynecologist did in feeling the ovaries and the tubes. To obtain the necessary practice, he advised the genito-urinary surgeon to make it

customary to examine in this manner every male patient coming into the clinic until all normal and pathological conditions could be fully appreciated.—*New York Medical Journal*.

INFLUENZA.—De Renzi (*La Clinica Moderna*, December, 1895,) says it is now possible to say that there can be no infection without Pfeiffer's bacillus. According to Pfeiffer, this micro-organism is only present in the bronchial secretion. It may be found in the sputum even after it has undergone some degree of desiccation, but the moist secretion is the chief medium of transmission. The influenza bacillus has also been found in the lungs in influenzal pneumonia; but it is possible to have a secondary infection there, as by the streptococcus or diplococcus. Influenza may be divided into the nervous and catarrhal forms, but these forms may be combined. Unlike other acute diseases, a disproportion may exist between the temperature and the pulse, the former being high while the latter is infrequent. The most common nervous symptoms are intense headache, often having the character of hemicrania. It is especially situated in the forehead, in and behind the orbit, and in the temple. It is occasionally as severe as in meningitis. Pains may be present in other parts, as in the course of the nerves, in the joints and muscles; they are aggravated by movement. The pain referred to the nucha is, in the author's opinion, so frequent as to be almost characteristic. At times the most grave nervous symptoms may be present simulating meningitis. Sometimes influenza produces a true meningitis or an encephalitis. Prostration is most constant. Occasionally mental affections appear during convalescence; they are usually of short duration, and end in recovery. Neuritis is sometimes seen. Some neuroses—as hysteria, neurasthenia, epilepsy, chorea—have followed influenza. Various catarrhs may occur in influenza. In influenzal broncho-pneumonia the prostration with rapidity of breathing is characteristic; there is but little alteration in percussion. The sputum may be blood-stained. Hemorrhages from mucous surfaces are occasionally seen. Gastro-intestinal symptoms occur. The attack of influenza is mostly short. The author advises against the use of antipyrin in influenza. He speaks highly of the use of salipyrin and of quinine. If pneumonia supervenes, considerable quantities of alcohol may be required.—*British Medical Journal*.

THE TREATMENT OF PNEUMONIA.—Dr. Georges Hayem states that amyl nitrite in large doses is much less dangerous than it is commonly supposed to be. It transforms hemoglobin in the globule itself into methemoglobin without destroying the anatomical elements without giving rise to globular

can be continued during the course of the disease, and for two or three days after complete defervescence. It does not change the duration of the disease nor the temperature range. It relieves the dyspnea, liquefies the expectoration, and diminishes the auscultatory signs. It does not possess any anti-pneumococcal properties. It is probable that the lung undergoes a marked sanguineous fluxion. At all events the heart is violently excited, its beats become stronger and more rapid, and the vasomotor effect results in facilitating the re-entrance of blood through the pneumonic areas and the absorption of the exudate. (*Journal des Practiciens.*)

Dr. Ernst Gales quotes the enthusiastic *dicta* of Sziklai in regard to pilocarpin and reports five cases. He concludes that (1) in recent cases doses of from one sixth to one third of a grain give rise to symptoms of collapse. In some instances there is a rapid extension of the process, and curative action in acute cases can not be demonstrated, and its use is not to be encouraged, especially in private practice. (2) In delayed resolution the remedy can be given in single doses of one sixth to one third of a grain twice or thrice daily and for five or six successive days, either internally or subcutaneously, without marked unpleasant after-effects. In this stage it may bring about a somewhat rapid resolution, but in many cases it will fail. Cardiac weakness is a contra-indication to its use.—*Centralblatt für die Gesamte Therapie; American Journal of the Medical Sciences.*

PSITTACOSIS. (?)—Palamidessi (*Il Policlinico*, November 15, 1895,) records the appearance of an infectious malady which, within twenty-four hours, attacked five members of a Florentine family, all of whom presented the same symptoms, though in varying intensity. These were great prostration with headache, fever, drowsiness with delirium, soon lapsing into a typhoid condition, but without diarrhea, gurling, spots, or the characteristic tongue of enterica. The spleen was slightly enlarged, and there were fine shifting *râles* at the backs of both lungs. The pulmonary symptoms appeared in three or four days without rigors; there was no bronchial breathing or local pain, but expectoration was present. Every conceivable etiological cause was excluded; some pathogenic cocci were obtained from the mouths of the patients. Three of the patients died within ten days, after prolonged coma; *post-mortem* the stomach and intestines were healthy, but the lungs showed pneumonic patches in all three cases, and there was slight fatty degeneration of the kidneys in one. The other two patients recovered. It was found soon afterward that about six or seven days before the outbreak of the disease a parrot, recently imported from Buenos Ayres, had died in the infected house after a short illness. This recalled the fact that an epidemic of fatal pneumonia had occurred in Florence a few months before in association with an infectious disease of imported parrots. (*Epitome*, October 12, 1895, par. 282.) Palamidessi obtained some parrots suffering from this disease, and made from them bacteriological cultivations, together with experiments on animals. Comparison of the results of these with those obtained with the pathogenic cocci from the mouths of his

patients have led him to the following conclusions: (1) In these five patients the abnormal infectious disease was associated with the presence of a micro-organism resembling in many points the microbe of fowl cholera, but differing from it in others; (2) in morphological, cultural, and experimental characters these germs much resemble those obtained by Nocard from parrots dead of a specific infection; (3) in certain biological characters, and in the lesions which they produce in birds, they are like the micro-organisms found by Eberth, Wolff, and others, in parrots dead of an infectious disease which gives rise to an epidemic among them; (4) in this instance the facts point to a specific infectious disease of parrots, resembling cholera in its clinical characters and *materies morbi*, which is transmissible to man, and from which the family in question probably suffered. The author admits that the proof is not yet complete, and needs further investigation, as regards both parrots and human beings; he points out that confirmation of his views should lead to restrictions being imposed upon the wholesale importation of parrots.—*British Medical Journal*.

ALCOHOLIC MYOCARDITIS.—Aufrecht (*Deutsches Archiv für klin. Med.*, Bd. liv. p. 615,) calls attention to a class of cases not hitherto recognized. The disease usually occurs in men between the ages of twenty-five and fifty, but in one case appeared in a man nineteen years old. Brewers and inn-keepers form a large proportion of cases; women are rarely affected. All the patients admit excessive use of alcoholics. That all who indulge in the same way are not affected may be due to mode of life, to exercise, temporary periods of abstinence, or other unknown causes. The disease begins gradually. Most patients in the beginning are well nourished. The first symptom is dyspnea, which may be noticed in talking; in more advanced stages on climbing stairs. A feeling of pressure in the heart region is not uncommon. The patients are usually able to continue their business, especially when it does not involve severe bodily labor. On account of the course of the disease the heart—the organ first affected—is rarely examined in the earliest stages. Cases examined at such times show an enlargement of the cardiac dullness, rarely a murmur. Aufrecht considers the lesion in the heart to be at first dilatation from the effect of the alcohol on the muscle; this is followed by hypertrophy of the muscular fibers and their nuclei, increase of connective tissue, thickening of the smaller arteries with increase of nuclei in their walls, and, finally, fragmentation of the muscle-fiber. For these lesions Aufrecht prefers the term at the head of this article. At an early period of the disease the liver is enlarged, perhaps on account of the dilatation of the heart, though the author thinks more probably from inflammatory changes due to alcohol. Later cirrhosis occurs, either atrophic or hypertrophic; in some cases there is peri-hepatitis. Congestion of the kidneys also occurs, with temporary albuminuria. In one case uremic mania with albuminuria gave the first indication of the kidney affection, the attack being brought on by a wine dinner. In another case

there was temporary diabetes. Alcoholic myocarditis was at first mistaken for nephritis, and it was only by prolonged observation of favorable cases that Aufrecht came to the conclusions indicated in this paper. According to him not beer alone but other alcoholics, even wines, are dangerous.—*American Journal of the Medical Sciences.*

HEART DISEASE IN CHILDREN.—Pott (*Fortschritte der Med.*, November, 1895,) discusses the etiology of heart disease in childhood. Among 30,000 children he found 95 cases of heart disease, upon which he bases his conclusions. Acquired heart disease is, in his experience, never primary, but always secondary to some acute infectious disease, particularly scarlet fever and acute rheumatism, occasionally to pneumonia. In early childhood the rarity of scarlet fever diminishes its importance in the causation of heart disease. The youngest case observed was a boy, aged three, in whom endocarditis developed in the second week of scarlet fever, leaving permanent mitral regurgitation. Rheumatic fever is the commonest cause in these earlier years, and the statements of other writers who assert the infrequency of rheumatic fever at this age are probably due to the difficulty of diagnosis causing it to be overlooked. Of seventy-eight cases of acute rheumatism with joint symptoms, twenty-one were under the age of two years. A frequent cause of heart disease in children is the so-called masked rheumatism, a vague febrile condition associated with naso-pharyngeal catarrh, enlarged cervical glands, enlarged spleen, herpes labialis, and pains in the limbs, sometimes called herpetic fever. These symptoms subside under sod. salicyl., and have sometimes been definitely associated with the onset of endocarditis and pericarditis. Owing, however, to the difficulty of proving their rheumatic origin, the writer has not included such among his rheumatic cases. Congenital heart disease, not including faults of development, may be due in some cases to an attack of acute rheumatism in the mother during pregnancy; one case is quoted in which there seemed to be such a relation. Congenital syphilis in three cases seemed to be the probable cause of the heart lesion. The frequency of acute miliary tuberculosis in children with congenital right-side lesions is noted, and the possibility of intra-uterine tuberculosis as the cause of the heart disease is suggested, though it seems more likely that the tuberculosis is favored by the heart disease.—*British Medical Journal.*

TREATMENT OF EPILEPSY.—Lui (*Rev. sper. di Freniatr.*, vol. xxxi., f. 2, 3,) has been trying the treatment of epilepsy advocated by Flechsig and Bechterew. Three cases were treated by Flechsig's method, which consists in a preliminary course of opium in gradually increasing doses up to 1.15 grains of the extract daily, followed by bromides, 7.5 to 8 grains daily. During the opium course two of the patients had a slight lessening in the fits, while in the third they became much more frequent and intense, so that instead of having two or three a week he had five or six. Severe

opium intolerance set in in one case, so that the drug had to be discontinued for a week. With the commencement of the bromide the fits ceased at once, and in one case have not reappeared after four months; in the two other cases the fits reappeared after two months, but much reduced, both in frequency and in severity. Bechterew's method—the simultaneous administration of bromide and adonis vernalis and codeine—was tried in ten cases, and with diminution of the fits, both in intensity and duration, in each case. With this method there are none of the inconveniences that are liable to arise from opium intolerance, and on the whole the author is inclined to prefer Bechterew's method. He has little faith in the borax treatment of epilepsy. Guiccardi, in the same review, gives an account of more cases of epilepsy treated after Bechterew's plan. The author concludes that the good effects which follow are due to the bromide and not to the adonis or codeine. It appears to be better borne than simple bromide, and it does not produce any ill effects, moreover, from the tonic effects on the vascular system due to the adonis. Bechterew's treatment may have an advantage over the ordinary treatment in cases in which there is cardiac debility.—*Ibid.*

CLOSURE OF ARTERIAL WOUNDS BY SUTURE.—Heidenhain (*Centralbl. für Chir.*, No. 49, 1895,) refers to two previously recorded cases of closure by suture of a wounded artery—in one instance the common femoral, in the other the common iliac—and reports a further case under his own care. In this case during the removal of some cancerous glands from the armpit, and after necessary resection of a portion of the axillary vein, a wound about half an inch in length was accidentally made in the main artery. The bleeding having been arrested by digital compression, the edges of the arterial wound, which took a longitudinal direction, were brought together by a continuous suture of catgut. The bleeding was thus completely arrested. The lumen of the vessel apparently was not diminished, and during the final stages of the operation the sutures held firmly in spite of strong arterial pulsation. The patient made a good recovery, and when last seen, about seven months from the date of operation, was quite free from relapse. There were no signs of disturbed function of the arm, and the axillary artery could be felt pulsating along almost the whole extent of the armpit.—*Ibid.*

TREATMENT OF SYPHILITIC ALOPECIA.—To expedite the cure of syphilitic alopecia, Brocq (*Journ. de Méd. et de Chir. Prat.*, September 10, 1895,) recommends the rubbing in every two days of the following: Bichloride

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ."

Vol. 21.

SATURDAY, FEBRUARY 22, 1896.

No. 4.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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JOHN P. MORTON & COMPANY, Louisville, Ky.

DR. JOHN FORD BARBOUR.

This learned and gifted young physician died at his residence in Louisville on the 15th ultimo. His disease was pneumonia, and his illness of but a few days.

Dr. Barbour was born in Danville, Ky., on the 25th day of May, 1861. His father is a well-known educator and professor of mathematics. Dr. Barbour was educated in the public and private schools of his native town, and in the Kentucky Central University, graduating from this institution in 1880. Choosing medicine as his profession, he entered the Hospital Medical College, of Louisville, attending one course of lectures in this school. This course was supplemented by further study at the Medical Department of the University of New York, from which school he graduated in 1884.

Later he came to Louisville and entered upon the practice of medicine, where he made a host of friends and laid the foundations of what promised to be a brilliant and useful career. Dr. Barbour's learning and talents were soon recognized in the city of his adoption, and he was called to places of trust which he ably filled.

He was adjunct professor of the Theory and Practice of Medicine in the Hospital Medical College, and later was professor of Diseases of the Nervous System in this school. He was also visiting neurologist to the Louisville City Hospital.

Dr. Barbour had rare talent as a writer. This was duly exercised in numerous papers, and in the editorship of, first, the Progress, and later, the New Albany Medical Herald. His essay, "Is Love a Disease?" attracted wide attention. It gave evidence of learning, philosophical acumen, and rare facility in the use of language.

Dr. Barbour was by nature a poet, and, had the current of his life not been diverted into medical channels, he would have won distinction in literature.

He passed away just as the fruit of his fair endeavors was mellowing for the harvest. His life was as beautiful as a poetic dream, but justified and sanctified by earnest and unselfish work for the good of man; and thus was his spirit fitted for translation into the higher spheres.

"Thy leaf has perished in the green,
And, while we breathe beneath the sun,
The world which credits what is done
Is cold to all that might have been.

"So here shall silence guard thy fame;
But somewhere, out of human view,
Whate'er thy hands are set to do
Is wrought with tumult of acclaim."

The Louisville Medico-Chirurgical Society, of which Dr. Barbour was a most popular member, has embalmed his memory in the following:

JOHN FORD BARBOUR.

Mr. President and Gentlemen: It is with no common sorrow that your committee takes note of the death of our young and gifted Fellow, Dr. John Ford Barbour. Although his years numbered less than half the Psalmist's allotment, Dr. Barbour had made notable achievement in medicine, winning for himself honor among his fellows and the confidence of a rapidly growing clientèle.

As a teacher and writer in medicine, and as a speaker upon the floor of our medical gatherings, Dr. Barbour acquitted himself with a grace, a facility, and a dignity that bespoke the coming master. His methods were exact and scholarly, and his work possessed a finish which placed it above criticism. Endowed by nature with unusual intellectual power, Dr. Barbour, by industry and enthusiasm in the pursuit of knowledge, acquired a full general education and rare culture. He was a connoisseur in art and in literature, an amateur in music, and an easy and ready conversationalist. And these qualities made him the delight of the social circle.

Mr. President, this Society has been called upon to mourn the death of not a few of its honored members, but never in its long history has death

borne from its sacred circle a member so young, gifted, and brilliant as John Ford Barbour.

When Schubert died it was written on his tombstone: "Music buried here a rich possession and yet fairer hopes." And of our beloved young brother it may be as fitly said: Medicine buried here a rich possession and yet fairer hopes.

Therefore be it resolved, That in the death of Dr. John Ford Barbour the medical profession loses a useful member, this Society a genial, scholarly, and gifted Fellow, and the city a valuable citizen.

Resolved, That we extend our sympathy to his family in this their sore bereavement.

Resolved, That a copy of these resolutions be spread upon the minutes, and a copy sent to his family and the medical journals.

W. O. ROBERTS, *Chairman*.

THOS. S. BULLOCK.

S. G. DABNEY.

WILLIAM CHEATHAM.

Notes and Queries.

CASTRATION IN HYPERTROPHY OF THE PROSTATE.—Albarran (*Presse Méd.*, November 6, 1895,) analyses his cases of prostatic hypertrophy with reference to changes in the volume of the gland, and increased contractility of the bladder following castration. Only histological examination can show if real atrophy results. In many cases after operation a rapid shrinking of the prostate is observed to follow in from one and one half to two months. The glandular *cul-de-sacs*, instead of being pressed together, are found separated by large spaces into a series of independent glands. There is a degenerative disintegration of epithelium which before disappearing takes on an embryonic type, but there is no proliferation of muscular or connective tissue; these appear abundant owing to the shrinking of the glandular tissue. Double castration causes atrophy of the normal, but not necessarily of the hypertrophied prostate, and evidence on this latter point is wanting. Clinically speaking, an atrophied prostate is one which has ceased to be felt *per rectum*. But congestion accounts for at least one third of the enlargement, and relief of retention where it exists is usually due to the diminution of this. Diminution of the volume of the gland admits of increased vesical contractility, and thus aids in relieving or curing the retention. The value of operation lies in securing these results. In dysuria without retention, where the vesical and prostatic congestion causes frequent micturition, though castration gives relief, any other measures for the diminution of the cystitis also relieve, and operation is unnecessary.

In acute retention also the results obtainable by operation are attainable by catheterization and operation is unnecessary. In incomplete retention the vesical muscular coat is weak and the congestive element less important. The benefits of operation in such cases are probably due to the atrophy of the prostate which allows the bladder to act more easily. In cases of complete chronic retention, where catheterization is badly borne or difficult, operation often results in rapid improvement or even, if there is no marked thickening of the bladder walls, in complete cure.—*British Medical Journal*.

A SAFE AND SURE METHOD OF REDUCING ENLARGED TONSILS.—(H. W. Kendall, M. D., Quincy, Ill.) The etiology of acute and chronic tonsillitis seems settled in the minds of all pathologists, but my experience points to a cause entirely overlooked by all the authors that I have consulted. Super-acidity of the *prima viæ* is in my opinion the essential cause of both the acute and the chronic disease, the catarrhal accidents being merely exciters.

I think that in every case of acute or chronic inflammation of these glands the salivary secretions will be found acid instead of alkaline, and that free doses of potassium or soda locally applied and ingested will give most rapid relief. The anatomy of the tonsil is well understood, but the great variation in the size and number of excretory ducts has not been particularly pointed out. These ducts are greatly enlarged in either acute or chronic hypertrophy of the glandular structure unless contracted by astringent or caustic applications. Since the general disuse of astringent gargles suppurative cases are rarely seen. Cauterization, once the general practice, is now almost abandoned for the reason that it is obstructive and converts the acute into the chronic condition.

We have an efficient cauterant and at the same time an antiseptic and alterant in pure hydrochloric acid, which is always friendly to human flesh. This is the agent that I have found so efficient in reducing enlarged glands in all parts of the body, but the method of using it is the particular point that I wish to present in this short paper. My method is the use of capillary glass tubes (Bohemian or Whital and Tatum's glass), one eighth of an inch caliber, heated in a Bunsen flame and drawn to a point, the shaft of the drawn part two inches long, with caliber one sixty-fourth of an inch, broken off and fire polished. Now if the shaft of the tube is five inches long the drawn part will hold, after dipping in a fluid, one minim; if the larger shaft is increased in length it will hold more. When the point of this tube touches any substance it will deposit a fraction of the drop; by long contact it will deposit all that it contained.

I dip these tubes into pure fuming hydrochloric acid and push them into the excretory ducts of the tonsils, three in each gland at each sitting, twice a week. This operation is painless and produces no inflammation or swelling. Five or six applications are sufficient for moderately enlarged glands. Nitric acid used in the same way will produce swelling and slough-

ing. Chromic acid so used is rapidly effective, but I abandoned it forever after producing tetanus in a malignant case.

The advantages of this mode of application are the ability to deposit a definite and minute amount of acid and avoidance of strangulation and choking effects of the fumes. After ten years' experience with this treatment I can quite positively say that in my opinion tonsils ought never to be removed with knife or scissors. By careful, gentle, and rapid manipulation of the first application any child will submit to the treatment willingly.

If a local anesthetic is desired, a saturated solution of bromide of potassium and bicarbonate of soda is better than cocaine, because the latter produces subsequent delirium or dizziness with asthmatic breathing in many cases.—*Journal American Medical Association.*

STYPTICIN.—Gottschalk (*Therap. Monats.*) records the results of the use of this drug in forty-seven cases of bleeding from the uterus. Stypticin is hydrochloride of cotarnin, one of the oxidation products of the opium alkaloid narcotin; in chemical structure it is closely allied to hydrastinin. It can be given subcutaneously, or more conveniently in powder or gelatine perles. The earliest experiences of its employment were not favorable, owing to too small a dose being given. Gottschalk finds that 0.05 g. can be taken five or six times a day without any evil results. It has a great advantage over hydrastis and other uterine hemostatics, in that, as might have been expected from its source, it possesses a well-marked and potent sedative action which is both local and general, and hence specially indicates its use in dysmenorrhic affections. Stypticin checks promptly hemorrhage resulting from pure uterine subinvolution, that is, that due to muscular atony and not to retention of membranes, etc. In cases arising from the latter cause ergot and hot douches together act better. In fungous endometritis stypticin is a valuable adjuvant to the curette; it is very useful when the patient objects to curetting, and particularly in those cases in which this treatment does not stop the hemorrhage. It is also useful in bleeding caused by fibroids or the climacteric; in hemorrhage secondary to parametritis or disease of the appendages it is less effectual than hydrastis. In such cases, however, idiosyncrasy is usually marked, and a cure is often not effected till the changes have been rung on all the various hemostatics. In purely congestive menorrhagia it is well combined with hydrastis. Stypticin is powerless to control the bleeding of uterine polypi, and is contra-indicated in threatened abortion, or indeed in any of the hemorrhages of pregnancy, as it has a marked power of stimulating uterine contraction. This may be induced by it directly or result indirectly from the anemia produced by its vaso-constrictor action. In menorrhagia the drug is best given four or five days before the period, and continued till bleeding ceases; this not only diminishes the hemorrhage, but also necessitates the use of much smaller doses. In all Gottschalk's experiments no other treatment than that of stypticin was adopted. The effect in subinvolution was last-

ing, but further research is required to establish the permanence of cure in other affections. Enough, however, has been observed to indicate the great value of the new remedy.—*British Medical Journal*.

TREATMENT OF ALOPECIA AREATA.—Brocq (*Jour. Cut. and Gen. Urin. Diseases*) describes the treatment of alopecia areata used by Sabouraud. He begins by applying upon the diseased patch a layer of vesicating fluid, and the following day, after having removed the blister, he applies upon the denuded corium a fifteen-per-cent solution of nitrate of silver, with or without previous cocaine anesthesia. If necessary, he renews these applications after ten or fifteen days. He thinks he can thus arrest the evolution of an alopecia at its onset, and that the results obtained are much better than those of other procedures. Brocq himself has for some time experimented on an extensive scale with Gautier at his polyclinic of La Rochefoucauld, with cupric electrolysis. After numerous trials they have come to the conclusion that the method does not give appreciable results which permit of its being advocated. The passage of the current and the decomposition of the tissue are painful; there remain small wounds which leave deep cicatrices, depressed at the points where the needles have been applied. The hairs do not seem to grow in any noteworthy manner about the points of operation, and the progress of the disease has not been arrested in a sufficient number of cases for one to conclude as to the real efficacy of this treatment. They intend to try electricity in another form. Leistikow (*Monatsh. f. prakt. Derm.*) for the last four years has successfully treated alopecia areata almost exclusively with chrysarobin. Formerly he employed it in the form of an ointment of five to ten per cent. Now he uses it in "sticks" as follows: Chrysarobin, 30 g.; colophony resin, .5 g.; yellow wax, 35 g.; olive oil, 30 g. This is rubbed like cosmetic on the scalp, care being taken as far as possible not to touch the hair. The head is then covered with a skull cap, and the next morning the chrysarobin is removed with olive oil. After some days irritation of the scalp comes on, manifested generally by a characteristic redness due to the chrysarobin, very seldom by bullæ and pustules. When this occurs the frictions with chrysarobin are replaced by applications of oxide of zinc ointment, which is also in due course removed with olive oil. As soon as the irritation has subsided chrysarobin is again used. The result is satisfactory in proportion to the regularity and perseverance with which the treatment is carried out. This treatment has been very successful in Leistikow's hands in twenty-two cases. Some cases have been cured in four weeks, but often the treatment has to be continued for several months.—*Ibid*.

EXTERNAL USE OF GUAIACOL.—Larra y Cerezo (*Rev. de Med. y Cir. Pract.*) has used external applications of guaiacol in a variety of conditions, including some of high temperature (typhoid fever, "fever of growth"). The effect has been to reduce the temperature by two to three degrees

centigrade within half an hour or so. In one case (typhoid) the rapid reduction of temperature was followed by alarming symptoms of collapse. In this case $1\frac{1}{2}$ grams of the medicament had been painted on the skin of the popliteal space and the front of the knee. The experience of Larra y Cerezo has led him to the following conclusions: Guaiacol suspended in tincture of iodine may be applied externally to the thorax as a revulsive in chronic broncho-pneumonia, and as a means of promoting the absorption of pleuritic effusions; for this purpose he uses it in the proportion of 3 grams to 20 grams of tincture of iodine and the same quantity of glycerine, this being painted on every day. In anasarca from anuria due to scarlatinal nephritis the same mixture may be painted on the lumbar region. As a local anesthetic guaiacol is less dangerous than cocaine; for this purpose it should be used dissolved in water in the proportion of 20 per cent, or suspended in sterilized olive oil (1 in 10, or 1 in 20); 5 to 10 centigrams of either of these preparations may be injected under the skin or mucous membrane, the anesthetic effect being produced in eight to ten minutes. Applied as an embrocation ($1\frac{1}{2}$ to 2 grams of pure guaiacol) to the skin the drug is a useful antipyretic in tuberculosis, typhoid fever, etc. Collapse must, however, be guarded against, and the method is contra-indicated in cases of cardiac weakness and in certain cases of idiosyncrasy.—*Ibid.*

THE TREATMENT OF SYPHILIS.—Dr. Morel-Lavallée regards as provisionally demonstrated the following propositions: (1) Mercury should be the foundation of the treatment; potassium iodide is a useful accessory agent of medication. (2) The mercurialization ought to be initial, prolonged, and of sufficient dose for giving to the future a relative security. (3) The case in which the mercurial treatment has been abandoned before the end of the second year is one insufficiently treated. (4) Mercury has a preventive action against all the manifestations of the disease; the proof of this is, for example, the constantly favorable action of mercurial treatment administered with the purpose of avoiding the hereditary manifestations in the descendants of syphilitics. In case of absolute mercurial intolerance one may be forced, in default of better, to have recourse to the iodides, even in the secondary stage.—*Revue de Thérapeutique.*

DIURETIC ACTION OF THE LITHIUM SALTS.—Mendelsohn (*Deut. med. Woch.*, October 10, 1895,) observes that if a remedy is to act efficiently it must be administered in a form in which it can be absorbed. Lithium carbonate is in this respect almost an insoluble body. If it is used it should be given in carbonic-acid water, whereby it is converted into a soluble bicarbonate. When administered alone it is changed by the action of the hydrochloric acid in the stomach into a chloride which can only be absorbed to a limited extent; thus it is not the action of the carbonate but of the chloride which has to be reckoned with. Of all the lithium salts the chloride is least able to combine with uric acid, and to produce a soluble salt which

may lead to the elimination of the uric acid. Thus the preference given to this lithium salt is not well founded. It is admitted that the treatment which aims at bringing about a solution with elimination of the uric acid deposited in the tissues is not altogether satisfactory. It would appear that the increased diuresis has much to do with the benefit obtained in these cases. By a series of experiments on animals the author has established the diuretic action of the lithium salts. An acetate of lithium was mostly used in these experiments. Both were administered subcutaneously or by the mouth; an increased diuresis was registered. In a few minutes after the administration of the lithium salts their presence in the urine could be demonstrated. Of all the lithium the citrate has the most diuretic action. Investigations carried out upon healthy individuals, as well as on those suffering from various manifestations of the uric acid diathesis, showed that diuresis was also produced in man by the lithium salts. The citrate and acetate of lithium were the salts mostly used.—*British Medical Journal*.

HEART DISEASE AND PREGNANCY.—Allyn (Univ. Med. Mag., December, 1895,) refers to the sources of error in statistics hitherto published on this subject; these result mainly from want of proper inquiry—first, into the number of pregnancies successfully passed through; and, secondly, into the time at which the cardiac lesion supervened. In sixty-two cases of mitral stenosis analysed by him there were ten fatalities in primiparæ. He considers that the usual effect of pregnancy upon the heart is to cause eccentric hypertrophy, but when the valves or walls are affected dilatation tends to predominate. Mitral disease, particularly stenosis, is much graver as a rule than aortic, but there is an attempt at a natural prevention of this owing to the high proportion of sterile women among the subjects of mitral stenosis. Cardiac disease, as Porak has shown, is usually aggravated by pregnancy. It has a very grave influence upon the fetus; abortion is very common, and where it does not occur the children are often stunted and weakly. The prognosis in aortic insufficiency, though not so serious as in mitral stenosis, is still somewhat gloomy, while that in mitral insufficiency is comparatively favorable. Mixed lesions are, of course, more dangerous than simple. Furthermore, there is also the possibility of fresh attacks of endocarditis during pregnancy; this is particularly likely to occur in young patients with comparatively recent lesions. Young women should hence be specially cautioned against marrying soon after the subsidence of an attack of endocarditis, and before full compensation has been restored.—*Ibid*.

CONJUNCTIVAL DIPHTHERIA TREATED BY SERUM INJECTIONS.—Speyer

whole eye chemosed. For two days it was treated by fomentations and sublimate lotion without effect. On the evening of June 5th, 10 cmg. of antidiphtheritic serum were injected into the cellular tissue of the left thigh. Improvement began at once, and the cure was complete on June 19th. (2) Boy, aged fourteen months, first seen on July 2d; had been ill ten days. Eyelids swollen and red, chiefly the upper; edges covered with pus, and a gray pseudo-membranous exudation was present on the tarsal conjunctiva. The ocular conjunctiva was not chemosed, and the cornea was healthy. The diagnosis was confirmed microscopically. An injection of 6 cmg. of antidiphtheritic serum was made at once into the left thigh. No change four and a half hours after; general health unaltered. On July 3d, improvement began, and the boy went out cured on July 10th. Speyer considers these two cases to be very encouraging.—*Ibid.*

TREATMENT OF ABORTION.—Jacub (*Monatsschr. f. Geburtsh u. Gynäk.*, September, 1895,) maintains that in threatening abortion the right treatment is rest and opium, with extract of viburnum prunifolium. If free flooding sets in, the os remaining closed, the vagina should be plugged with iodoform gauze or aseptic wool. When the os is dilated so as to allow of the passage of a finger, the ovum should be detached and extracted, and the uterus and vagina syringed out once and for good with any suitable disinfectant in solution. When the dilatation of the os is imperfect, so that the finger can not be introduced without force, while flooding grows severe, it is right to press the finger forcibly through with great care till the cervix is greatly dilated. Then extraction must be practiced. In many cases the expulsion of the ovum may be left to nature. Ergot should be given for a week after abortion, spontaneous or induced. Jacub deprecates the routine employment of the curette and of vaginal irrigation.—*Ibid.*

CHARLES WOOD FASSETT, Secretary of the American Medical Publishers' Association, has just issued a revised edition of the Medical Journal Exchange List, containing the names and addresses of all publications in the United States and Canada devoted to medicine, surgery, pharmacy, hygiene, microscopy, and allied sciences. This list is printed upon adhesive paper, and is used extensively by publishers in mailing their exchanges, as well as by scientific writers in sending out reprints, etc. Price, \$1.25 per dozen complete sheets. (Furnished free to members of the Association.)

THE American Medical Publishers' Association will hold its third annual meeting in Atlanta, Ga., Monday, May 4, and, considering the many recent applications for membership, a large attendance is assured. A number of new and important topics have been suggested for discussion, and the programme will include papers from experienced publishers. Members and others desiring to contribute papers will be furnished valuable information upon communicating with the secretary, Charles Wood Fassett, St. Joseph, Mo.

Special Notices.

DR. C. F. TUCKER, of Syracuse, N. Y., January 9, 1896, writes: Some time ago when I was doing a country practice at Jordan, Onondaga Co., N. Y., I wrote Messrs. Battle & Co. that I could not get the uniform results from Bromidia that I had previously. They sent me a 4-oz. sample, and that was all right, and I still have on hand a little of that particular sample.

The party who had dispensed my prescriptions, after I had expressed my opinion very strongly, confessed that he had purchased a considerable quantity of a mixture at a less price, said to contain exactly the same ingredients, and had been dispensing that when Bromidia was prescribed.

After that I had no more trouble, and I can truthfully say that you can find it in my emergency case, office, and in my regular "grip" always, and I have never seen any thing but perfect satisfaction attending its use, and I have given it to patients of all ages and about every condition.

I have used it in the last stages of pulmonary tuberculosis, and in severe cases of chronic bronchitis, in delirium tremens, etc., and I always use it when I want a certain hypnotic.

I have used it in doses from two minims up to two and three drachms. It is one of the mixtures of so-called treacherous chloral that has never, thus far, caused alarm. I have been familiar with Bromidia since away back in the 80's when I was a clerk in a drug store, and since I have been practicing I still regard it as a reliable old friend, and so it has proved on many occasions.

ACCURATE ADMINISTRATION OF LITHIA.—Wm. R. Warner & Co.'s original Lithia Water Tablets (3 and 5 grains) admit of an accurate dosage of lithia not to be obtained in any natural lithia water.

These tablets are securely packed so as to maintain their permanency, in consequence of which, when a Lithia Water Tablet is placed in a glass of water it quickly dissolves, effervescing in so lively a manner as to excite the interest of the patient to such a degree that the unpleasant thought that he is about to take a medicine does not arise. Now, that lithia has become a valuable remedy for rheumatism, lithemia, gout, gravel, Bright's disease, etc., these tablets are without doubt the most convenient method to administer it, as enough Lithia Water Tablets may be carried in the pocket to make two and one-half gallons lithia water of definite strength.

LABOR SAVING: The American Medical Publishers' Association is prepared to furnish carefully revised lists, set by the Mergenthaler Linotype Machine, as follows:

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THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

VOL. XXI.

LOUISVILLE, KY., MARCH 7, 1896.

No. 5.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

ROENTGEN RAYS.

BY CHARLES A. MARPLE.

Instructor in Science, Louisville Male High School.

Wilhelm Konrad Roentgen was born the 27th of March, 1845, at Lennep, a small manufacturing town about twenty miles northeast of Cologne, Rhenish Prussia, Germany. Upon completing his studies in the gymnasium and university he gained his diploma entitling him to the degree of Doctor of Philosophy at the University of Zurich, July 12, 1869, and on the 22d of the following December was appointed assistant in physics at the University of Wurtzburg. On May 11, 1872, he accepted a similar position at the newly founded Strasburg University. Later he served in an academy at Hohenheim, but in 1876 was appointed to a professorship at Strasburg. Three years after he was called to Giessen, and August 31, 1888, was appointed professor and director of physics at the University of Wurtzburg to succeed the eminent physicist, Kohlrausch, which position he holds to-day.

In brief, the history of the discovery which has made the name Roentgen famous for all time is as follows:

During last December, Prof. Roentgen, while working with a Hittorf vacuum tube, which is similar to a well-exhausted Lenard or Crookes tube, the tube at the time being completely surrounded by a close-fitting shield of black paper, observed that whenever a discharge from a secondary wire of an induction coil passed through the tube, while no light was apparent to the eye, a screen in the vicinity coated

with a fluorescent substance—in this case barium platino-cyanide—glowed and was rendered visible, even though the screen was placed more than two yards from the tube, and, what was still more startling, when the side of the screen coated with the fluorescent material was turned away from the tube, and even a volume of several hundred pages interposed between the screen and tube.

He next observed the effects of these “rays” upon photographic plates, and found the sensitive film had undergone a change, and then, by placing various articles upon the cover of the plate-holder, showed that aluminum, gutta-percha, pasteboard, wood, flesh, etc., were more or less transparent to the “new rays,” while bone and most metals were in varying degrees opaque. His discovery was published in December, 1895, in the proceedings of the Wurtzburg Physical-Medical Society, in an article entitled “On a New Kind of Ray.”

Calcium sulphide, rock salt, and various other substances exhibit fluorescence when acted upon by the rays, and Edison has just announced that tungstate of calcium is *highly* fluorescent, and has constructed what he calls a fluorscope, whereby the rays, after passing through the object under observation, are rendered visible on a screen coated with this substance.

Since the discovery was made public, workers all over the world have repeated his experiments, and are striving to learn something of the nature of the “new kind of rays.”

The physical laboratory of the Louisville Male High School possesses four of these Crookes tubes, which are merely glass bulbs of various shapes—cylindrical, spherical, or pear-shaped being the common forms—with two or more metal electrodes sealed into the tube and the air exhausted so that only about one millionth part remains, the exhaustion being carried to such a high degree by a Sprengel mercury pump. The particular tube with which the successful results have been obtained is nearly spherical and three or four inches in diameter, with three electrodes—one at the top of aluminum, one diametrically opposite, also of aluminum, and a third half way between the two, terminating in a small square of sheet platinum, midway, on a straight line between the other two—with the flat side of the platinum facing them. It was brought out by Sir William Crookes nearly thirty years ago, along with his other tubes, of which there are more than twenty different kinds, to show the way “radiant matter,” as he

termed it, behaves in high vacua. This one was to show the heating effect of the molecules of air which were directed by the electric current with great force against the central piece of platinum, causing it to become white hot. The induction coil, to the secondary of which the tube was attached, was excited with from seven to ten Grove cells—seven when freshly set up sufficed—so that ten to twenty volts and five to fifteen ampères were obtained. The best results were gained when the coil was working so as to give a three- or four-inch spark across an air-gap. Very little light was emitted by the tube except where the rays struck against the side, when a pale-green fluorescence of the glass was to be seen. Sensitive plates may be exposed on any side of the tube, but for convenience exposures were usually made underneath, with the tube about four inches above the object to be “taken.” The time of exposure varied from one to two hours, one hour and three-quarters giving good results, though it is hoped soon to reduce this to much less than half. From two exposures made on a knee a longer time is found necessary for good definition in that region than for a hand, though a bullet was located fairly well just below the knee in an exposure of two hours and a quarter. The sensitive plates used were the fastest obtainable—Leed’s 27 and Cramer’s crown.

A German experimenter has found that warming the sensitive plate to 100° Fahrenheit and over reduces the time of exposure nearly one half. Now, merely a few words in conclusion, as to the nature of the “new rays.” Scientists have long deemed it impossible for force to be transmitted without a medium. It would be impossible to stand at the bottom of a belfry and command the bell at the top to ring, or even go through the motion of tugging at a bell-rope, without grasping the rope, which in this case is the medium by means of which the force is transmitted to the bell. Sound can not be transmitted without the medium, air, and is carried forward by means of a longitudinal vibration. No more can light and heat be conveyed to us from the distant sun without some medium—our atmosphere extending only a few hundred miles at most. Hence all space has been conceived to be filled with imponderable matter called ether, and light is transmitted to us by means of a transverse vibration in this ether. A longitudinal vibration of very great frequency has long been suspected, and Roentgen, at the close of his paper announcing his remarkable discovery, used the following words: “Should not the new rays be ascribed to longitudinal waves in

the ether? I must confess that I have in the course of this research made myself more and more familiar with this thought, and venture to put the opinion forward, while I am quite conscious that the hypothesis advanced still requires a more solid foundation."

LOUISVILLE.

THE USES OF THE ROENTGEN RAYS IN SURGERY.

BY CUTHBERT THOMPSON, M. B., C. M., EDIN.

Assistant to the Professor of Clinical Surgery, University of Louisville.

The following report of five cases shows the first practical uses to which the Roentgen rays have been put to in Louisville to aid in the diagnosis and treatment of surgical cases.

The first is the case of a boy who shot himself in the hand on February 28th. The bullet was easily located by the aid of the Roentgen rays on March 11th, and removed at the surgical clinic at the University of Louisville on March 13th. This case is more fully reported by Prof. Roberts in another part of this journal.

The second is that of a school-boy, who, while sitting with his legs crossed, accidentally shot himself in the calf of the left leg about six inches below the knee. Judging from the position in which he was sitting, and also from where he told me he had felt pain at the time of the accident, I believed that the bullet had traveled toward the knee joint, but at the time I saw him, which was about two months after the accident had happened, the external wound had completely healed up. So I was not able to use the probe, but I thought I could feel the bullet just underneath the inner head of the tibia. The Crookes tube was placed immediately over this point, and the skiagraph which we got showed the bullet to be in the place where I had indicated. This is one of the first successful skiagraphs any one has taken showing the bones forming the knee joint, which it does perfectly, as well as the bullet lying just underneath the inner head of the tibia. As the bullet gives the boy no trouble we are not able in this case, as in the former, to cut down and verify our diagnosis.

The third is that of a gentleman who received an injury some time ago to his hand, which at the time he says was diagnosed as a sprain of the wrist joint, but on making a skiagraph we found that his second metacarpal bone had been broken and the two pieces had united at a slight angle.

The fourth case shows the result of tubercular disease on bone. The man had formerly hurt his right hand, and when I saw him, about six months ago, he was suffering with tubercular disease of the wrist joint. The abscess in his hand had been opened before I saw it, but we then thoroughly scraped it out, and after some time it healed up. The skiagraph of his hand shows a thickening of the first and second metacarpal bones, and the destruction of all the carpal bones, except the pyramidal pisiform and unciform, and these have entirely lost their ordinary shape. A number of other observers have also noticed the fact that bones affected with tuberculosis more easily allow these Roentgen rays to pass through than normal bone does.

The fifth case is that of a gentleman who received an injury to one of his fingers, causing a flexion of the terminal phalanx. The skiagraph in this case shows an enlargement of the terminal end of the second phalanx, causing a partial dislocation of the terminal phalanx.

In addition to the five pathological cases I have described we have also taken skiagraphs of a number of normal hands and other parts of the body.

Owing to the fact that cartilage easily allows these Roentgen rays to pass through it, one of these skiagraphs taken of the hand of a young boy shows the plate of cartilage joining the epiphyses to the shafts of the bones. This permeability of the cartilage to the rays makes the bones of the carpus, etc., appear as if separated some distance, but we know that this space is filled up by cartilage.

From most of the skiagraphs taken up to the present time it is almost impossible to tell whether the foreign body is on the front or back of the limb, or even embedded in the bone, but this difficulty can be obviated, I believe, by taking pictures of the limb in different positions.

It is necessary that the part of which you want to take the skiagraph be applied to the photographic plate as closely as possible, but as an intervening bandage causes no inconvenience it is easy to effect this with a few turns of bandage.

At the present time we are able to differentiate by means of these rays between bony and cartilaginous tumors; between fractures, dislocations, and diastasis; locate foreign bodies in the limbs; diagnose causes of ankylosis of joints, and examine for diseased or separated fragments of bone, and probably in the near future the rays can be used to more advantage on the trunk and head.

In fractures this method of examination is especially useful. For example, it can be used to make the diagnosis, and after the application of the splints and bandages you can make a skiagraph of the part and satisfy yourself and others that the bones are in exact apposition, and we all know how important this is from a medico-legal point of view.

Indeed, I believe that in a very short time the apparatus to produce these rays will be considered as necessary in a surgeon's office as a probe is at the present time.

I do not describe the technique of taking these skiagraphs, as Prof. Marple does this, and I wish to say that he deserves every credit for the great proficiency he has acquired in the taking of them.

Mr. John L. Cochrane evinced great skill in the original and perfect method he uses in developing the photographic plates.

LOUISVILLE.

ROENTGEN RAYS IN SURGERY.

W. O. ROBERTS, M. D.

Frederick Bordenberger, aged sixteen years, while handling a pistol, accidentally discharged it, receiving the shot in the palm of his right hand. The bullet (22 caliber) entered at a point corresponding to the third carpo-metacarpal articulation. There was no wound of exit. The accident occurred February 28th, ult. The patient saw no physician until the second day of March, when he consulted my colleague, Prof. Turner Anderson, who referred him to me. I first saw him the 3d of March, at noonday. At that time the wound was septic, and the hand and forearm were greatly swollen. I applied an antiseptic poultice and a splint. This consisted of absorbent gauze wrung out of a hot carbolic solution (1 to 40), covered with absorbent cotton and rubber tissue. This treatment was continued until March 9th, when the swelling had become very much reduced. I was unable to locate the ball by probe or by palpation, and deemed the case a good one upon which to test the Roentgen rays. Accordingly the patient was put in charge of my chief of clinic, Dr. Cuthbert Thompson, who took him to the laboratory of the Boys' High School, where Prof. Marple, with the assistance of Dr. Thompson and Mr. John Cochrane, succeeded in getting the perfect skiagraph here presented. This picture was completed

on the 11th inst., and on the 13th, in the presence of the medical class, at the university clinic, I cut for the ball at the point indicated in the picture, and removed it.

The bullet was found lying longitudinally upon the anterior surface of the os magnum, near its proximal extremity. It was partially embedded in the bone. The Esmarch bandage was used, and upon its removal a trifling hemorrhage from two superficial vessels followed. These were ligated. The dissection was done rapidly, and with that full confidence which the surgeon feels who proceeds upon lines of certainty.

This case is one of the few in which the searching power of the X cathode ray has been tested in surgical practice, and I am happy to be able to add my testimony to the efficacy of a discovery which promises to bring to light the dark places in surgical diagnosis.

LOUISVILLE.

TREATMENT OF TUMORS OF THE MAMMARY GLAND.*

BY WILLIAM L. RODMAN, A. M., M. D.

Professor of Surgery and Clinical Surgery, Kentucky School of Medicine, Louisville, Ky.

I shall offer no apology for asking your attention this evening to a brief paper upon the treatment of breast tumors. Often as the subject has been written upon and discussed, and great as have been the advances made, I feel assured that not only is the laity but the medical profession as well slow to appreciate the immense good following rational surgery practiced for the relief of mammary neoplasms. This belief, or rather unbelief, has in fact some foundation upon which to rest, for it must be admitted that prior to the last decade results were unsatisfactory, and surgery was justly looked upon as in the nature of a forlorn hope. Why was this so? The question is easily answered. It was due to false teaching as to the pathology of malignant growths. No surgeon believing in the constitutional origin of cancer—and nearly all did so believe twenty years ago—could look upon an operation as done to-day by any up-to-date surgeon as any thing else than a dangerous and needless mutilation of the patient.

During my pupilage, which ended sixteen years ago, I have known many distinguished

only a few were optimistic enough to believe that an operation might prolong life. A cure was not thought of, much less expected. How different to-day! No one well informed believes in the constitutional origin of cancer or that the neoplasm is but the local expression of a general dyscrasia. That the disease is primarily local is accepted of all men. Then, if local, why not curable by free and early removal? Here, as elsewhere, the pathologist has blazed the way for the operator, and given him heart to sacrifice seemingly healthy tissue in order to get beyond the infected area, or the well-named "invisible zone." In no field of surgery is the aggressiveness of operators more to be admired than in dealing with malignant disease in general and that of the breast in particular, for it is here that the best work has been done.

To get some idea of the possibilities for doing good to suffering women, it is only necessary to remember that there are fourteen thousand deaths from cancer in the United States annually, two thirds of these (9,333) are in women; in 25 per cent of all cases in the female the lesion is in the breast, in about 25 per cent in the uterus, and in 50 per cent in other parts of the body combined. Cancer is unmistakably on the increase all over the civilized world, and an increased liability to this most dreadful disease is one of the penalties a nation pays for its material and intellectual advancement.

If surgery could promise nothing more than to add one or two years of comfortable existence to each of the 9,333 lives annually yielded up to breast cancer in this country, it would still be an inestimable boon. I shall show that it is able to cure absolutely from 25 to 50 per cent of all operable cases, according to the time of applying for relief, and to prolong the lives of incurables, as well as to allay pain and smooth the way to the grave. The medical man who makes light of a lump in the breast of one of his patients at this modern day takes upon himself an awful responsibility. In patients under forty years of age the chances for malignancy in a given tumor of the breast are rather more than ten to one. Past forty they are thirteen to one. When it is further remembered that innocent growths may degenerate into malignancy after years of quiescence prompt action is still more imperative. Do not wait for retraction of the nipple, which some suppose invariably to accompany cancer, for at most it occurs in but 52 per cent of cases (Gross); other surgeons have not found it so often. Pain is even a more mis-

The treatment of benign growths, solid and cystic, is simple enough. They should be removed along with their capsule, but it is unnecessary to ablate the entire organ. The nipple may in most instances be preserved, and this should always be done when practicable, as it prevents deformity and leaves a gland more or less functionally active. It is not amiss to remember that innocent neoplasms are prone to affect the upper and inner quadrant of the gland. In all cases the surgeon should make an incision into the growth before removing the entire organ.

Keen, of Philadelphia, tells a good story of the immortal Langenbeck. While attending one of his clinics a patient was brought before the class with a supposed malignant tumor of the breast. Langenbeck had previously examined the case and felt certain of his diagnosis. He at once proceeded to remove the entire gland, in a rapid and brilliant manner. When the breast had been removed and an assistant was dressing the wound, Langenbeck, in the presence of the class, made a gash into the tumor to verify his diagnosis, and a liberal discharge of pus was the result. He looked surprised, but with great composure said, "I never did that but once before in my life." An incision before removal of the breast would have saved the great clinician some humiliation and the woman her mammary gland.

Malignant Growths. For all practical purposes we need make no distinction between carcinoma and sarcoma, as their treatment is the same. However, since sarcomas generalize by the blood and not by the lymphatics, it would seem unnecessary to clean out the axilla in all cases in the very thorough manner in which it is done—if the operation be rightly performed—in operating for cancer. I confess, however, that I make no distinction, and it is my belief that other surgeons do not. One of the most beautiful and thorough operations that I ever witnessed was done by Keen for sarcoma. He went to the clavicle in search of glands and fat, leaving literally nothing in the axilla but vessels and nerves. There are three most excellent reasons why sarcomas demand the same thorough extirpation as cancers.

First, mistakes in diagnosis may be made, and one had always best err on the side of doing a radical operation.

Second, sarcomas do sometimes cause involvement of the axillary glands; not often it is true; but if it ever occurs one should operate as if such a case was being dealt with.

Third, some of the most malignant growths ever encountered in the breast are sarcomata. I have seen one such growth in a pregnant

woman destroy life within a twelvemonth. Of course the condition of pregnancy hastened its progress.

Before giving the technique of the complete or radical operation, as it is usually called—and I shall describe none other, it being the only one worthy of mention—I must insist upon the importance of educating women to believe that as soon as a lump is discovered in the breast safety depends upon getting the best surgeon to be had, and getting him as soon as possible. It is all important to remove malignant tumors before involvement of the axillary and other glands has occurred, as the chances of a permanent cure are at least four times greater before than after infection of these glands. It is not to be inferred that enlargement of the axillary lymph glands is of such bad prognostic import as to make such cases inoperable. Far from it, as a rightly done operation will cure 10 per cent of such cases permanently. When patients apply before such infection, at least 40 per cent may be saved, with a probable 50 or 60 per cent. Another point of importance: Patients will sometimes insist upon having only the tumor removed, and that part of the breast and nipple shall be spared. This is natural, but it is a sentiment which should not be yielded to by the surgeon. The last case I operated upon was of this kind. I insisted upon being left unfettered, free to do what my judgment dictated, and declined to operate unless such was the case. As I had suspected, the tumor proved to be malignant and a very thorough operation was done, the axilla being invaded and cleared of glands and fat (of which there was a quantity) from base to apex. I have never done a more radical operation, and, notwithstanding the fact that the axilla was so radically attacked and a part of the pectoral muscle excised, the usefulness of the arm has not been in the least impaired. The crucial test, dressing of the back hair, can be as well done now, three months after operation, as ever.

Operation. I shall now describe the radical operation as practiced by a number of leading surgeons of this and other countries. A general bath should be given the patient the day before operation. The operative field should be most thoroughly disinfected, the armpit having especial attention; all hair should be removed. This being done, antiseptic gauze should protect the parts until the anesthetic is given. A second thorough disinfection of the parts is then secured before the operation is begun. An elliptical incision—usually from the sternum to near the axillary margin—is made; but it may be from above downward (as in my last case), according to the location and size

of the tumor. The amount of skin sacrificed should depend entirely upon whether it should be seemingly healthy or not. As a rule too little skin is removed, and on this account regional recurrences are not infrequently seen. The incision should rapidly extend down to the pectoralis major muscle. The fascia covering it must go and every vestige of mammary gland along with it. It is unnecessary to lose time in applying forceps until the breast has been lifted out of the way but not detached from the axillary end of the wound. Good assistants will control hemorrhage for the time being by pressure. (Most of the vessels enter from the axillary side of the wound, and hence will not be cut in the first stage.) An incision is now made along the lower border of the great pectoral muscle well up into the axilla. After cutting through skin and superficial fascia, it is well to discard sharp instruments for the blunt dissector of Allis, which in this operation is simply indispensable to one familiar with its use. The axillary vein, on account of its size and color, is soon seen, and from this time on is the key to the situation. With the blunt dissector and finger nail all lymphatic glands and the fat in which they are embedded must be searched for from base to apex. The space between the two pectoral muscles usually contains some large glands, and must not be overlooked. After this the space of Mohrenheim, between the tendon of the lesser pectoral muscle and clavicle, must be carefully examined for glands and fat. One can easily carry the finger into the subclavian triangle of the neck. When the axilla has been thus dealt with, vessels and nerves will stand out almost as prominently as in a dead-room dissection. One will be surprised at the small amount of hemorrhage where there are so many vessels, if one is careful to use only blunt instruments. The only danger is the tearing of some large vein, which with reasonable care will not happen. It is important that the breast, axillary glands, and fat be removed *en masse*. In this way no lymphatic channels are cut across, liberating juices and cells to infect healthy tissue.

The removal of the pectoral fascia has been shown by Heidenhain to be all important. The infiltrations of the disease will usually be limited by this fascia, but it is now and then necessary to excise a portion, perhaps most, of the muscle. It has not been shown, however, that Halsted's plan of invariably removing the great pectoral muscle in its entirety is necessary or advisable. Willy Meyer goes farther than Halsted and removes the lesser pectoral muscle at the same time. Halsted also removes the supraclavicular glands in all cases. I do not

think surgeons will follow either Halsted or Meyer in their more radical procedures, as most of these operations are in elderly women, for which reason shock should not be increased and prolonged without compensatory advantages. As yet such advantages have certainly not been proven.

The wound should now be thoroughly dried. This is most important if the ideal method of dispensing with drainage is to be followed. A large dead space is left, and unless accurate approximation of the sides and edges of the wound is secured suppuration will ensue. This, in my judgment, can be done, and primary union secured as a very general rule. Some surgeons, as Keen, prefer to drain with the tube for twenty-four or thirty-six hours; others do not drain at all. The latter method is the ideal one and the one most generally followed. I never use a tube myself, but cut an elliptical hole at the most dependent part of the axilla, which I find drains admirably well if the fat along the edges of the opening is freely removed. I formerly introduced iodoform gauze as a drain, but have discarded it. The hole is all that is necessary and is free from objection. I have seen no one else follow this plan, nor have I known of its being recommended. The wound is now carefully brought together by interrupted silkworm-gut sutures, care being taken to avoid tension. Where the skin is scant one can by undermining it slide the flaps so as to gain space. (Shrady and others follow this plan.) If too much skin has been sacrificed for approximation, one must either treat the case as an open wound or immediately skin-graft by the method of Thiersch, and in this way avoid a tedious convalescence. In applying the dressing it is necessary to make firm pressure under the axilla so as to obliterate the dead space left behind. If this be not done, fluids will accumulate and suppuration ensue. There is no more important step than the application of the dressing. I never, as in many other operations, trust this to an assistant, no matter how fatigued I may be. The arm should be confined to the side in the Velpeau position for forty-eight hours, afterward it may be freed. Some patients will complain of this position, and when they do I free the forearm, keeping the arm firmly bandaged at the side. This, as a rule, gives prompt relief. I change the dressing at the end of twenty-four hours, no other dressing being done until the sixth day, when I remove part or all of the stitches. My cases very generally run an afebrile course, and the patients sit up in forty-eight hours. A dose of morphine is seldom necessary.

Mortality. The English, with whom the complete operation originated, but who, strange to say, do fewer such operations now than are done by surgeons in this country, Germany, and France, would have us believe that the mortality following is much greater than after simple excision of the gland. This would seem *a priori* to be the case, for opening such an important space as the axilla, filled as it is with many large vessels and nerves, is calculated to increase shock, to cause a greater loss of blood, and if not aseptically done is likely to be followed by sepsis variously manifested. But the statistics of American and German surgeons doing the complete operation are much better than the showing made by our British brothers, not only as to ultimate cure but as to mortality. Butlin, Treves, and Williams, of the English, all recent writers, place the mortality as high as ten per cent, which in the light of less than one per cent mortality of six American surgeons whose results have been published within the last year, seem extraordinarily high, and can not be understood unless old statistics are included; for certainly the principles of asepsis—and that is all there is to it—are as well understood and carried out in England as anywhere. In my limited experience I can well remember when a breast amputation was a serious operation, and during my service in a Philadelphia hospital, in 1879 and 1880, there were deaths from erysipelas, pyemia, and secondary hemorrhage, the result of sepsis. Billroth at one time admitted a death-rate in his own practice of twenty-three per cent. Asepsis has done as much for this operation as it has for laparotomy, and it is as unfair to call out old statistics for the one as for the other. I once heard the greatest surgeon this country has ever produced (S. D. Gross) say that ovariectomy was an unjustifiable operation on account of its dangers. *Tempora mutantur et nos mutamur in illis.* While the careful training students get to-day, both in theoretical and clinical work, the tyro who fleshes his maiden knife may look for better results than a master of bygone days. The results of Keen, Bull, Dennis, Weir, Halsted, and Powers, six Americans who within the year have published their statistics, show a mortality of less than one per cent (six hundred and fifty-six operations and six deaths). This number of cases, reported by entirely reliable men, is sufficient to settle forever the fact that the death-rate can not be excessive. I should say that it will be two or three per cent with the average operator. In my own practice I have never lost a case nor had cause to feel the least anxiety about a patient.

Ultimate Results. We now come to the vital question, are women permanently cured by operation; and, if so, how often? Having served under S. W. Gross in Jefferson Hospital, in 1879, when he was about the only one in this country doing the radical operation, and knowing of his excellent results by seeing some of his patients years after operation, it is but natural that I, in the beginning of my professional life, became a believer in the curability of breast cancer. To doubt was, as Virchow recently said, "to resist the brute force of facts." On other occasions in this Society I have taken advanced grounds on this subject, and perhaps made myself liable to the charge of optimism. I am prepared to go farther to-night than ever before, and shall give statistics from unquestioned sources to justify my position. From the 12 per cent of cures claimed by Gross and Banks in 1880 we have gotten to the 25 or 50 per cent of 1895. Until recently Bull, of New York, with 26.6 per cent of recoveries, held the record. Dennis, of New York, the late president of the American Surgical Association, in his address before that body in May last, gave the result of his life-work in malignant disease. He had records of thirty-eight breast amputations for carcinoma, seventeen of which had passed the three-year limit and were justly called permanent cures. This is 45 per cent. He also reported $66\frac{2}{3}$ per cent of cures in sarcomas of the breast (six cases, four recoveries). This is too small a number to generalize from. It will, however, be admitted that the prognosis in sarcoma should, as a rule, be somewhat better than in cancer.

For complete details W. T. Bull's series of one hundred and eighteen cases is still the most satisfactory yet published, as he leaves nothing to be conjectured. Forty per cent of his cured cases had axillary involvement, as shown by microscopical examination. In cases where there was no such involvement he secured 54 per cent of cures.

Halsted's series of seventy-six cases was apparently a good showing, but sufficient time had not elapsed since operation in nearly all of his cases. Keen, unfortunately, has not kept a record of all of his two hundred cases, but thinks we should get from 25 to 50 per cent of cures.

I will close with the following propositions:

First, all mammary growths should be removed at once, for innocent tumors carried for a long time become a menace.

Second, the complete operation should always be done in cases of malignant disease.

Third, in nearly every case it is simply impossible to detect enlarged

glands until the axilla is opened. Keen says that he can not do so once in ten times.

Fourth, the mortality should be with average operators about three per cent.

Fifth, a radical operation should promise from 25 to 50 per cent of permanent cures, according to the time when patients apply.

Sixth, when in doubt, operate; never wait for symptoms.

LOUISVILLE.

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, November 22, 1895, Dr. W. L. Rodman, President, in the chair.

The essay was read by Dr. William L. Rodman; subject, The Treatment of Tumors of the Mammary Gland. [See page 167.]

Discussion. Dr. A. M. Vance: Considering the statistics Dr. Rodman has quoted, we western surgeons to-day are "not in it." Judging from my own experience and a knowledge of the work of many surgical brethren, we do not get any such results as to permanent cure as he has quoted. I believe the reason for this is that the people out here are not educated in surgical matters as they are in the eastern cities, and we do not see our patients as early as do eastern surgeons. The majority of the cases we see here are their bad cases. I can, however, look back over my experience and recall cases where I have removed carcinomata of the breast no larger than a hen's egg, where there has been no involvement of the glands of the axilla, and still the patients died within a year. I have never lost a patient as a result of the operation for breast cancer. One old colored woman, during my service at the City Hospital, died the night after the operation from an overdose of morphine.

I agree with Dr. Rodman in his description as to the method of operation, the more thorough our operation the better will be our results, but can not agree with him as to the outlook for permanent cure. Nor does my experience bear me out in promising as much for cancer anywhere else on the body, nor even sarcoma, though I have seen cases operated upon for sarcoma that have gone on for a number of years. I

still believe in the vast majority of these cases, particularly where the axillary space is invaded, that drainage ought to be practiced. I always use gauze. I can not understand how a simple elliptical incision, without any thing to hold it open, will not collapse and prevent escape of the accumulated fluids.


Dr. A. M. Cartledge: The subject has been so thoroughly covered by the paper that we can add little more than a résumé of our experience in this connection. My experience has probably been a little unique in cancer of the breast, in that I have come to look upon such cases as much more favorable for operation than formerly. Unfortunately I can not detail my cases correctly, because they have not all been followed as they should. Certainly I am aware of the outcome in many of them, and know that they have passed the surgical limit. I have had a rather small experience in operating for malignant disease of the breast, but it has been singular in this respect, that I believe out of about twenty cases, so far as I am aware, there has been a recurrence in only four, and a local recurrence in two that were subsequently operated upon and became entirely well. These cases have passed the three-year limit. Since my first operation for malignant disease of the breast, which I did with a pocket case by candle-light, I have never done any thing but the complete operation. That is to say, taking up the entire breast, the pectoral fascia, and lymphatics of the axilla. After cleaning out the axillary space thoroughly, I have always thought it wise to use draining, as an immense dead space is left which might become septic, and I use a drainage-tube for two or three days. I have never seen a case of breast tumor that did badly locally, so far as the gross wound was concerned; they have all gotten well, and I have never had a patient to die primarily after such an operation. The earliest death I have had after breast operation was three months. This was a case in which I did a most extensive piece of surgery on a woman whom I feel satisfied died of secondary carcinoma of the liver. She had been operated on once before, having had a tumor of the breast removed, which recurred in eight months. I not only took away the breast, but the greater portion of the pectoralis major muscle, cleaning the axilla of every thing but nerves and blood-vessels. Microscopical sections were made at the time of the operation, and I cut wide in making my incision; still there was suspicious-looking tissue under section, although macroscopically it looked healthy, and I again cut wide. When the dissection was completed, the wound was probably as much

as twelve inches in diameter. Skin-grafting was practiced in this case, and up to the time of the woman's death of secondary trouble, metastatic deposits, the wound remained in good condition, complete healing having taken place. But for this metastatic trouble I believe the local result would have been perfect.

Of the two cases where I had a recurrence in the cicatrix, one was an epithelioma; I operated the second time, and until the patient's death, some time afterward from another disease, there was no evidence of recurrence. Five years ago I operated upon a case and the growth recurred in six or eight months. A second operation was performed, and the woman still remains healthy. I believe I have gotten over sixty per cent of permanent cures in the cases of breast cancer that I have operated upon. I have had some of the most unpromising cases, in which I could make no promises as to what the ultimate result would be. Some I operated upon believing I was simply prolonging life for a short period and obviating a painful termination, and some of these cases have become permanently well. We know where death occurs in cases operated upon the patients have much less pain.

Bearing directly upon the paper, I have nothing to add, except I believe the operation should be proportionate to the disease. I would remove the pectoral muscle if I thought it was involved in the cancerous process; I would take up the fascia if it were involved; I would clean out the axillary space to the best of my ability in all cases.

In this connection I want to say that I have had only one opportunity of dealing with a wound of the axillary vein, and that was not a great while ago. The vein was unfortunately wounded, and lateral suture was practiced by means of catgut. There was a slight oozing of blood for two and one half weeks. The wound remained aseptic and eventually healed nicely. I disliked to ligate the vein, fearing edema, which is so likely to follow the ligation of this vein. Oozing continued for such a length of time that I was tempted to open the wound and ligate the vein; finally, however, perfect healing took place. The suture to that extent was not a positive success, but we may say that it was a partial success, and saved at least ligation of the vein and edema, which would probably have resulted from sudden occlusion of the vein in its continuity.

Dr. James **Chenoweth**: I would simply like to emphasize what *Dr. Vance* has  about the results of operations upon breast cancer, as

has impressed me that a very radical operation very early in the disease is the secret of permanent success. I believe the poor results are more often due, not to the fact that the patient does not consult the surgeon as soon as need be, but a failure on the part of the surgeon to do a sufficiently radical operation. He does not remove enough tissue, especially when the growth is small. In other words, if the growth is a very small matter we should make a very big matter of its removal.

Again, I believe the failure to do this is not due to objections on the part of patients, but the fault lies with the surgeon; from a mistaken feeling and friendship and sympathy for the afflicted, he tries to let them off easy. Sometimes I fear it is a feeling of sympathy for the surgeon himself that tempts him to keep out of an infected axilla, or he fears to make the case out as bad as it really is lest he lose the case.

Dr. W. H. Wathen: I can add nothing to the paper or to the remarks by previous speakers, as they have covered the entire field. I fully agree with the gentlemen who have discussed the paper, that these operations should be performed as early as possible, and should be in every instance thorough where there is deep involvement of the fascia or any of the glands. I feel that the mistake is very seldom made in operating for benign tumors believing they are malignant, for nearly all tumors of the breast are malignant. Billroth, who reports four hundred and forty cases of tumors of the breast, states that out of this number he found only eighteen benign; and a benign tumor of the breast might possibly eventually become malignant. I have frequently seen Dr. Rodman operate for the removal of malignant growths of the breast, and have always been impressed with the thoroughness of his operations, removing in every instance all the skin that could possibly be involved, the fascia, and all the glands in the axillary space, going up even to the clavicle; and I am sure the only way to make a good record or get permanent cures is to operate as early as we can, and in every instance to be thorough. If the case is sarcoma, then probably in many instances there would be no necessity of removing the axillary glands, because they are not often involved, and when involved the disease would then have extended so far that operative measures would offer at best not more than temporary relief.

Dr. W. C. Dugan: One point made by Dr. Chenoweth I wish to emphasize, that is the removal of breast tumors early. There is no doubt that every surgeon who operates for general practitioners has

found that the patient has been told by the attending physician that the tumor is small and the operation will not be severe, the doctor fancying this will encourage the patient in having the operation done. I am inclined to think that surgeons heretofore have been too much disposed to practice conservative surgery, as we generally speak of it, doing too small an operation where the tumor is small, instead of doing a radical operation such as Dr. Rodman has so graphically described. If a breast tumor is malignant, the axilla should be opened as he has described, and its contents thoroughly removed. I am sure this is the secret of the success of the surgeons he has quoted. My results have not been nearly so good as Dr Rodman has reported. I am free to confess that I have not in all cases cleaned out the axilla as it is being done by some surgeons, though statistics show beyond all question of a doubt that the operation is not complete until this is done. I have not had a great number of these operations, but, without being exact as to the per cent, am sure that the successful cases are very, very much less than the essayist has stated, although I have never lost a case from the effect of the operation.

Dr. W. L. Rodman: No operator should feel that he has done his duty in operating for breast cancer if he simply invades the axilla and removes a few enlarged lymphatic glands on the inner or pectoral wall. All glands between the greater and lesser pectoral muscle, as well as those in the space of Mohrenheim, must be removed at the same time, because these glands are infected, together with all the other glands in that region, and to remove the lower and leave the upper ones can not possibly accomplish what we hope to do by operative measures. Neither is it sufficient to remove the enlarged glands alone; every particle of fat in the axilla ought to be sacrificed. I have seen a great many breast operations performed, and until the last two or three years I had no conception of what a radical operation was. I had never performed the operation as I understand it now until two years ago. The results of Bull, Keen, Halsted, Dennis, Weir, and Powers, who have performed a great many operations, show what can be done. I do not think it is necessary to remove the pectoral muscle except in rare instances. Halsted always does it. The investigations of Heidenhain show very clearly that the disease usually stops at the pectoral fascia, but occasionally this will not be the case, and it may not only be necessary to remove the muscle, but rarely resection of the ribs is perfectly justifiable, as has been proven by Keen and others.

As to the elliptical incision which Dr. Vance mentioned, instead of drainage-tube, I remove quite a piece of skin, making an elliptical incision, trimming away the fat carefully from the inside, leaving an opening about the size of my finger, and the result is perfect drainage. If there is much serum in the axilla it must necessarily go in the direction of least resistance, and it will drain there.

Dr. Cartledge speaks of wounding the axillary vein. I have seen one such case in the practice of a surgeon in this city about a year ago. There was a great amount of axillary involvement; not only were the glands infiltrated and enlarged, but they had coalesced, and there had formed extensive adhesions to the vessel, and in separating them the axillary vein was cut. The patient died afterward of septic phlebitis. That accident will sometimes occur, and it is the only dangerous accident that is likely to happen from thoroughly cleaning out the axilla. I have seen the axilla so thoroughly cleaned as to resemble a dead-room dissection; you could see the vessels and nerves standing out prominently. The axilla was emptied of every thing except the vessels and nerves.

Undoubtedly Dr. Chenoweth is on the right track when he says that the timidity of operators keeps them from doing thoroughly radical operations at times.

I disagree with Dr. Wathen. It is true, as I said in my paper, that enlargement of the axillary glands does not often occur in sarcoma, but it does sometimes occur, and we should remove them as a rule, for it does not increase the mortality if the operation is done with aseptic precautions.

I have seen deaths result from operations upon breast cancers. The first was a very fleshy woman from New Jersey, operated upon by the elder Gross in 1879, during my service in Jefferson Hospital. Billroth admitted a death-rate of twenty-three per cent in his practice.

JOHN L. HOWARD, *Secretary.*

Foreign Correspondence.

BERLIN LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

A Study of Diphtheria and Antitoxin in Berlin.

The recent discussions among the profession at home relative to the present status of serum therapy encourages me to say a word or two regarding diphtheria and its antitoxin, in accordance with some observations which I have made this winter in Berlin, and according to the standpoint taken by various authorities in Germany. It must at once be evident to the physician who will make a study of a series of cases of diphtheria, that the solution by Loeffler of the cause of the disease followed by Behring's therapy have been of great service to us. And on this point authorities in Europe are to-day, with some one or two single exceptions, all agreed. Unfortunately, however, cases as they are met in practice often present other factors than the single one demonstrated by the first author to be the exciting agent in diphtheria, and only exceptionally permit of such early recourse to therapy as demanded by Behring, if his agent is to accomplish what he claims for it. On the other hand, there is regularly found present in a large percentage of cases a mixed infection, and just what benefit the introduction of antitoxin will have in these cases, although Roux and Martin would seem to prove that it works less advantageously, those whose experience has been largest are unwilling to-day to state. Aside, however, from a writer connected with the University of Halle, who reasons from the well-known principle that staphylococci are often only capable of affecting tissue cells after such cells have been subjected, accidentally or intentionally, to some physical or chemical irritant, and proposes that we may possibly fear a staphylococci infection in these mixed cases where serum is used, the serum so influencing cell-life as to permit of such an infection, there seem to be no other objections offered to its use in cases of mixed infection. Clinically this theory propounded by the Halle professor has not been verified, and it is the custom of the best clinicians in Berlin to make use of antitoxin in every case where a diagnosis can be made, irrespective of any part played by staphylococci, streptococci, or diplococci. Nevertheless, while awaiting no probable ill results because of the association of these secondary micro-organisms where antitoxin has been employed, they would rather not have them present, and place a higher estimate on the probable effect of the serum in a given case where the bacteriological examination finds the Loeffler bacillus alone.

The time necessary to such an examination and differential diagnosis is never less than fifteen to twenty-four hours, and considering that the physician rarely sees a case of diphtheria until after several hours, or days maybe, have elapsed since the first development, it would be unwise to defer the treatment until the diagnosis can thus be positively made, and it is therefore recommended by Heubner and Baginsky to make use of the agent promptly in every suspicious case. Indeed, in Heubner's Children's Klinik in the Charité, as well as in the "Kaiser and Kaiserin Friedrich Kinder Krankenhaus," where Prof. Baginsky is in charge, the first duty is invariably to give each child an injection of antitoxin, and to arrive at a more perfect diagnosis later, when time has permitted of an exhaustive microscopical and bacteriological examination of a particle of the false membrane. This at first would seem to be a very unscientific procedure, but in the light of our present diagnostic ability, and considering that no permanent ill effects have been noted from the use of antitoxin, even where diphtheria did not exist, it must be reserved for the future to devise a better method. We are warned against loss of time by Behring, who declares that he was able to prevent the development of diphtheria (in his experiments upon guinea-pigs) only where a recourse was had to antitoxin within twenty-four hours after the animal had been inoculated with the Loeffler bacillus, and that he could limit the progress of the disease, or bring about a cure in a case already developed, only when the agent was used within the first one or two days of the diphtheritic process. Reasoning on this score, Behring explains the supposed action of antitoxic agents in this wise: He argues that it is necessary to render a large number of the total cells in the animal economy immune, in order to prevent the development of a disease or bring a diseased process to a standstill, and claiming that cells once infected by a toxic agent are no longer capable of being rendered immune, insists therefore, and with especial reference to diphtheria, that the antitoxin be promptly employed, and before too great a per cent of cells are overcome by the diphtheritic poison. The rapidity with which the body is overcome depends chiefly upon the type and virulence of the infection, and it is now accepted that the pure diphtherias and not the mixed infections are as a rule most virulent and make up the greater number of so-called septic cases. However, as previously stated, such cases of pure diphtheria, due solely to the Loeffler bacillus, belong to the minority.

In a recent report of eighty-four cases there were present only eighteen where the Loeffler bacillus was alone, whereas thirty-two were complicated with staphylococci, nineteen with diplococci, six with streptococci, five with both staphylococci and streptococci, and four with a form of short, thick bacilli, innocuous, and probably the so-called "pseudo-diphtheric" bacilli, which Loeffler claims is an innocuous form of his bacillus. The exact part played by these secondary bacteria is difficult to determine, and aside from such complications as pneumonia, which more often occurs where the diplococci are present, it would seem that their rôle is not a deleterious one, in fact

that they outgrow and destroy the Loeffler bacillus, so that at times the bacilli have been noted to disappear from a false membrane at the same time that a luxuriant growth of cocci was observed. Artificially, and on culture media, this truth is readily demonstrated, and for this reason it has been advised to inoculate two media always (one elective for the bacillus and one non-elective) when examining a particle of false membrane. This recommendation would especially address itself to America, where heretofore blood serum as a medium has been used almost exclusively. On it, as is well known, the bacillus diphtheria finds the conditions most favorable to its growth, and increases rapidly, while the various cocci grow sparingly or not at all. Glycerin agar, on the other hand, permits of growth by both organisms, and will thus often demonstrate some form of cocci where previous cultures of blood serum would not permit them to grow.

Of interest is the recent finding of bacilli in the internal organs, especially in the spleen. Canon found bacilli in the blood, Kutscher demonstrated them in the lungs, and Frosh was able to cultivate pure cultures in ten out of fifteen autopsies from various internal organs.

However, the question of the presence of bacilli in the throat and mouth, and how long after the establishment of convalescence from an attack of diphtheria they are to be found there, is one of the most practical points in the handling of the subject, and one upon which too much stress can not be laid. Experiments have not failed in this direction, and it is estimated that many of the cases of later rhinitis fibrinosa, as well as conjunctivitis, following an attack of tonsillar diphtheria, have as their cause latent bacilli in the faucial cavity. Virulent bacilli have been cultivated daily and for as long as fifty-four days from the fauces of children who have had diphtheria, but as a rule after three to four weeks there are none to be found. In a dry state, viz., in the false membrane, the bacillus remains viable about four weeks, and has even been cultivated from a piece of membrane six months old. Darkness, moisture, and low temperature guard it against death. But all attempts at analysis have as yet not revealed the identity of the poison produced by the bacillus (seemingly in quality the same where growth takes place in the animal body, and where we cultivate the germ artificially); and further than that it is exquisitely toxic, this chapter of the subject has remained shrouded in as much darkness and mystery as it ever was. That it is not an albuminous body would seem to be indicated by the culture of bacilli in sterile urine, where, although it was shown that the usual toxic product was present, the urine failed to react albuminous. Further than this nothing new regarding the identity of diphtheritic toxin has come to my notice. Nor is it clear just how the diphtheritic process finally comes to an end. An antitoxin is to be demonstrated in the blood, but not earlier than about the eleventh to twelfth day after the establishment of convalescence, and it disappears after only a few days, as proven by Abel.

The treatment of diphtheria in the hands of the pediatricians in Berlin, as well as in the hands of the general practitioner, has for its main object

the early and repeated use of antitoxin. By some the agent is considered as almost unfailing in its action, and by these men no local treatment is resorted to, and none even where the process would be so easily attacked as when existing on the lips and other readily accessible exposed parts. Others, while acknowledging an undoubted virtue in antitoxin, insist upon supplementing it with local treatment, and also make use of such stimulating and general supporting measures as the symptoms demand. A local treatment warmly advocated by Loeffler consists of the following ingredients: Alcohol, 60 vol., toluol, 36 vol., liq. ferri sesquichlor., 4 vol.

Since my arrival in Berlin it has been my good fortune to see many cases of the disease, and to watch their progress as well as to hear the subject lectured upon by such able clinicians as Gerhardt, Senator, and Leyden. In the Charité, where Prof. Heubner is such an enthusiast on the subject, the children receive absolutely no other treatment, and the strength of the dose depends more upon the advanced stage of the disease and the condition of the patient than upon his age. The antitoxin is repeated in one half to full quantity after three to four hours if there is no abatement in the symptoms. Behring's formula, as prepared in Berlin by the Schering factory, or by Meister Lucius and Bruening in Hoechst-on-the-Main, is used in all German institutions. The agent is put up in three strengths, each bottle holding the same quantity, and the quality varying according to the number of immunization units desired. In conversation with Dr. Hans Aronson, of the Schering factory, I was told that examinations of several products of antitoxin produced in other countries, including a sample from the United States, showed them to be inferior and containing a less number of units than stamped on the bottle. I see no reason why we can not produce a product as good as the German article, and hesitate to believe his judgment a fair one after examining only one specimen. It is natural to suppose, where such a considerable quantity of antitoxin is used as here in Germany, that already quite an abundance of statistics have been amassed. My observations, extending over a number of cases, have brought me the following conclusions, which I reserve for the few closing words of my paper. They are as follows:

That we can only expect a favorable result when the conditions as first emphasized by the discoverer of antitoxin are met, viz., use of the serum within the first twenty-four to thirty-six hours after the appearance of the disease. Later than this, and in severe cases, there seems to be no appreciable result. In milder cases time is not such an essential factor. The local process seems to be brought to a standstill, and even to retrograde, if antitoxin is used very early. In those cases where a good result was to be expected, a fall in the temperature and a general improvement of the patient was observed by me, but never so early as is claimed by some writers. It

not to enter the cavity. In this connection it may be interesting to state that antitoxin is readily absorbed by the stomach, and that dogs have been rendered immune by feeding them on sheep meat where the sheep had been previously brought up to a point of tolerance, then slaughtered for experimental purposes.

Serious complications of the kidneys are not believed to be occasioned by antitoxin, nor in fact, in the hands of those who have had the most experience with the agent, are any of the associated so-called complications or sequelæ believed to have any import, or to be lasting. The abuminuria, observed by many to develop suddenly after an injection of antitoxin, has been shown by carefully prepared large statistics to be very slight and to disappear shortly, not again to reappear after a second or third injection, in most cases. The urticaria-like eruptions and the other polymorphous exanthemata, sometimes closely resembling a scarlatinal rash, are of only a few days', at times only a few hours', duration, and further than to make the patient uncomfortable (even this condition does not always exist), with a rise in temperature on the tenth to eleventh day, which lasts a day or two, they too pass away and leave no trace of disturbance. In a like manner the joint symptoms seem to be of little moment, and no associated endocardial complication has been reported. In short, no lasting damage seems to be established as caused by antitoxin. Behring claims that it is not the antitoxin proper, but irritating substances in the serum which occasion these passing disturbances; and since Kossel proves that serum obtained from the goat or cow is less liable to produce such disagreeable symptoms than other serum, as that from the horse, this view is more than probably correct. In the Charité we observed that fresh antitoxin was much more liable to produce exanthemata than that a few weeks' old. It has also been argued that the present presentation of the antitoxin in a solution of blood serum, and containing certain preservative antiseptics, is unpractical and altogether too voluminous for an already weakened absorptive power to assimilate, to say nothing of the extra work required to separate the antitoxin and finally reject or eliminate the antiseptics and blood serum, a labor often too great for a weakened economy.

May we not expect the future, with its associated advances, to offer us an agent altogether more satisfactory and free from these self-evident objections? Regarding the use of antitoxin as a prevention for diphtheria, there is no doubt but that it has virtues, but how long the body remains immune is another question which the present statistics have not determined. However, a consensus of opinion would to-day seem to indicate that only for a short time does the agent exert its protective power, and that it is necessary to renew the same often. In the various departments for diseases of children, in hospitals throughout Germany, it is customary to give each exposed individual under twelve years of age an injection representing about one hundred and twenty immunization units, and with a succeeding exposure, after three to four days, no hesitation is made in repeating this

dose. One hundred and twenty units, according to the existing German system, is a very moderate dose.

Of one hundred and twenty-five children thus rendered immune, in families where a brother or sister had laid others liable to infection, three afterward only developed diphtheria; numbers of them had exanthemata, three had joint symptoms, but none had albuminuria. This, again, would seem to verify Behring's statement; and with expected improvements in the quality and quantity of antitoxin, may we not hope for sober and thorough trial to accomplish even as much with this discovery as has been accomplished by that of Jenner?

LEON L. SOLOMON, M. D.

BERLIN, February, 1896.

Abstracts and Selections.

TRAUMATIC CEPHALHYDROCELE.—In the Edinburgh Hospital Reports of last year Mr. Hogarth Pringle has a paper in which he gives an account of two cases of this somewhat unusual condition. The first was that of a man aged twenty at the time of his admission to the Edinburgh Royal Infirmary under the care of Mr. Annandale. The history was that at the age of sixteen months the patient had fallen down an area a distance of fourteen feet. He was unconscious when picked up, and blood was oozing from both ears and from his nose. There was a large swelling over the left side of the head, but no scalp wound. For a long time after the accident the patient was dull and stupid, but always able to recognize his parents. About three months after the accident he had his first fit. In this he was said to have lost consciousness, but not to have been convulsed. Fits recurred at varying intervals, and were then accompanied by convulsive movements of the limbs, which were stated to begin in the left hand and to be followed by loss of power on the left side. The parents could not say how long after the accident pulsation was noticed over the seat of the swelling which succeeded the fall. On admission he was found to be well developed and fairly proportioned, but the left side of the body was not so well developed as the right. Mentally he was distinctly deficient. He was able to read and write and could understand what was said to him, but he was slow of comprehension. The knee-jerks were exaggerated, but no foot-clonus was present. The ocular fundi were normal. On the left side of the skull was a pulsating tumor with a "gutter" running downward and backward for two and a half inches. No unusual or significant sensation was produced by pressure over this swelling. The parents being anxious that an operation should be performed in the hope of improvement, Mr. Annandale dissected back a skin flap and found a lax-walled cyst over the upper

area of the depression. This was opened, and a large quantity of clear, yellowish fluid escaped. An aperture was found in the skull large enough to admit the little finger. The patient was much collapsed after the operation, and at night peculiar movements of the limbs on the left side set in. He never regained consciousness and died early the following morning. At the necropsy the dura mater was found to be firmly adherent round the margin of the opening in the skull. There was an opening at the junction of the the parietal, occipital, and temporo-sphenoidal lobes through the brain substance at a point corresponding to the opening in the skull. This led into the left lateral ventricle, which was considerably dilated. There was some blood in the middle fossa of the skull, the convolutions of the left side were not so well developed as those of the right, and the cerebral tissue was sclerosed. No explanation was found in the condition of the brain after death to account for the left-sided weakness and convulsions which were present during life.

The second case was that of a female child aged four years, who at the age of one year had also had a fall down a stair. When found she was unconscious and had a swelling above and in front of the right auricle. There was no bleeding. Three months later the swelling was incised, but only dark blood came away, and for a few months it remained absent. After that, however, it gradually returned, and at the time at which she came under my observation there was a smooth, oval swelling two inches long by one inch and a half broad. There was feeble pulsation, which ceased with pressure over the carotids. There were no fits and no apparent mental impairment. A hypodermic needle was introduced into the swelling and a syringeful of clear, yellow fluid withdrawn. This fluid was found to reduce Fehling's solution and was considered to be cerebro-spinal fluid. There was no change in the swelling at first, but when the patient was seen, a year after the puncture, it was much smaller, without pulsation, and there seemed to be at one point a small opening in the bone.

Mr. Pringle gives a short account of the different views held as to this condition, and is himself of opinion that the opening in the skull depends upon the absorption of the bone devitalized at the time of the accident. The actual injury appears to be a simple fracture of the skull occurring in early life and attended with laceration of the dura mater and probably wounding of the brain. The condition, as we have stated, is by no means common, and Mr. Pringle is fortunate in having observed two such interesting cases.—*Lancet*.

HEMIPLEGIA AS A RESULT OF GONORRHEA.—In a recent number of the *Neurologisches Centralblatt* Dr. Ludwig Bruns, of Hanover, relates a case of somewhat unusual character. He remarks that gonorrhea has as occasional complications serious affections of the nervous system only recently recognized. Fournier has described gonorrheal sciatica, Hayem and Parmentier, Chavier and Teviera, Spillman and Haushalter, and Leyden (and

Gowers in this country might have been mentioned) have published cases of myelitis apparently closely connected with gonorrhea. Engel-Reimers has also described cases of gonorrheal polyneuritis as well as a case of meningitis. Tambourer has described a case of double hemiplegia following phlebitis occurring in the course of gonorrhea, and Pitres mentions two similar cases of hemiplegia also occurring in the course of the same disease. Dr. Bruns' case was that of a young woman, aged twenty, who immediately after her marriage became infected with gonorrhea, which, in spite of treatment, caused perimetritis and salpingitis. Soon after this, and without any warning, she was suddenly attacked with convulsions in the right side of the face and tongue and in the right upper limb, especially the hand. The leg at this time was apparently not affected. These attacks were repeated, and during the attacks and for a little time after them there was aphasia. There was paresis of the right face and of the right arm, and the right leg later became similarly affected, so that when she was seen by Dr. Bruns there were right-sided hemiplegia, complete motor aphasia, and slight blunting of sensibility. There was no headache or vomiting, and the ocular fundi were normal. There was no hemianopsia, the heart was sound, and there was no sugar or albumin in the urine. After this there was gradual improvement, especially in regard to speech, but the motor affection of the limbs still remained distinct and considerable. Dr. Bruns concludes that, looking at the history of the sudden onset, accompanied by epileptiform attacks, the condition determining the hemiplegia was an embolic one, and that the embolism had its origin at the focus of gonorrheal inflammation in the fallopian tube. But it is difficult to see how this could happen. An embolus breaking off from an inflammatory focus in the region of the fallopian tubes would naturally have to traverse the pulmonary capillaries before it could reach the brain. This, of course, is impossible, and if such an embolus had traveled to the heart in the large veins there might have been a pulmonary apoplexy. But how such an embolus could get to the brain we fail to see, and it seems more feasible to ascribe the hemiplegia to thrombosis occurring in cortical vessels, the thrombosis being probably determined by the morbid blood state to which the gonorrheal inflammation had given rise.—*Ibid.*

ABDOMINAL SECTION BY COW'S HORN.—Skilling (Amer. Jour. Obstet., July, 1895,) records a case in which this accidental operation was performed without a fatal result in a non-pregnant woman. The injury is of interest in relation to well-known instances of successful cesarean section carried

intestines protruded; loss of blood was relatively trifling. The intestines were replaced, the peritoneum closed by a continuous suture of fine silk, and the remaining layers of the parietes by interrupted silk sutures. The wound healed almost throughout by first intention except at the lower angle, where slight suppuration took place, probably from unavoidable contamination with dirt during or after the accident. Recovery was rapid and complete.—*British Medical Journal*.

THE PLACE OF RESEARCH IN EDUCATION.—Science Progress for January contains an interesting address delivered at a metropolitan polytechnic by Mr. H. E. Armstrong. He points out how fast we are losing our commercial prosperity because we will not, whether we make butter or cheese or leather or any thing else, study scientifically the factors which go to insure success. Concerning our present methods of education, he says:

"English boys and girls at the present day are the victims of excessive lesson learning, and are also falling a prey, in increasing numbers year by year, to the examination demon which threatens to become by far the most ruthless monster the world has ever known in fact or in fable. Ask any teacher who has to do with students fresh from school his opinion of them; he will say that in the great majority of cases they have little if any power of helping themselves, little desire to learn about things, little if any observing power, little desire to reason on what they see or are called on to witness; that they are destitute of the sense of accuracy, and satisfied with any performance, however slovenly; that, in short, they are neither inquisitive nor acquisitive, and as they too often are idle as well, the opportunities offered to them are blindly sacrificed. . . . Boys and girls at school must be taught from the very earliest moment to do and appreciate. It is of no use our teaching them merely about things, however interesting, no facts must be taught without their use being taught simultaneously; and as far as possible they must be led to discover the facts for themselves."

These are admirable words and should be handed to every teacher in the kingdom.—*Lancet*.

LOCAL DAMAGE IN CRIMINAL ABORTION.—Haberda (*Vierteljahrschrift f. gerichtlich. Medicin*, vol. xcv, 1895,) finds that the damage to the soft parts inflicted in criminal attempts at abortion is usually quite characteristic. This is especially the case when undertaken by persons not instructed in anatomy or obstetrics. Even an experienced midwife or practitioner is apt to use force, as steps for legitimately inducing premature labor are slow and methodical, and hence likely to attract too much attention. Haberda finds that the damage to the cervix is usually a groove-shaped rent, while depressions are found in the uterus which sometimes

The cervix is occasionally found torn off from its vaginal attachment to the posterior fornix. In one such case a canal, clearly artificial, was found to lead from the torn point on the surface of the cervix to the internal os. In one case a perforating instrument had been thrust into the urethra and damaged the bladder, causing peritonitis. Another shows the blind violence often used in these criminal proceedings. Perforation of the anterior wall of the rectum, the vagina, bladder, and several coils of small intestine was detected.—*British Medical Journal*.

A COSTLY MISTAKE.—At the recent assizes held in Birmingham, England, the result of an action by the widow of a Mr. Harrop, showed the price of a fatal error, which, terminating in a sad loss of life, was but justly met by a substantial award. The deceased was in the habit of taking phenacetine as a remedy for headache. In June last he called at the shop of a retail druggist and asked for a small quantity to take; he was supplied with a white powder, the taste of which, he observed, was bitter. Shortly afterward he was seized with rigors and vertigo, and died on his way to the hospital within an hour of taking the dose. A lady, also, who had taken a similar powder from the same druggist a few days before had died from convulsions within an hour of its administration. The powder at the *post-mortem* examination of Mr. Harrop was found to be composed largely of strychnine. The druggist stated at the inquest that the bottle labeled "Phenacetine" had been supplied to his order by the wholesale druggists. He had ordered at the same time a small quantity of strychnine, which came in a separate bottle with label, but the contents of which were proved to be pure phenacetine. By some extraordinary blunder the contents of the first bottle had come to be composed of one third strychnine and two thirds phenacetine. The wholesale druggists admitted the responsibility, and, a consultation being held, a settlement was effected upon the following terms: The record was withdrawn, the defendants agreed to pay £2,800 damages and plaintiff's taxed costs, and the retail druggist was to pay his own costs and undertake not to bring action against the wholesale druggists in respect of the plaintiff's death or its consequences.—*Lancet*.

FORMOL IN URINARY THERAPEUTICS.—Lamarque (*Assoc. Franc. pour l'Avancement des Sciences*) has used formol in one-per-cent solution for washing out the bladder and urethra, and in five-per-cent solution for instillation in these localities. In acute gonorrhea and in gonorrheal cystitis the results have not been very encouraging; in the chronic gonorrhea they have been better. It is particularly in cases of tuberculous cystitis that the treatment has been successful. The only disadvantage is the pain caused by the drug; this, however, though intense at first, quickly ceases. Daily washings with formol solution have been effectual in stopping hematuria, relieving pain, and lessening frequency of micturition in cases where every other treatment had failed.—*British Medical Journal*.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ"

Vol. 21.

SATURDAY, MARCH 7, 1896.

No. 3.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

Subscriptions and advertisements received, specimen copies and bound volumes for sale by the undersigned, to whom remittances may be sent by postal money order, bank check, or registered letter. Address

JOHN P. MORTON & COMPANY, Louisville, Ky.

THE KENTUCKY STATE MEDICAL SOCIETY.

With the abatement of the blizzard, the peep of the crocus, and the return of the robin, under the caresses of Zephyrus and the warm south, it is expected that the winter-handicapped Kentucky doctor shall throw off his temporary frigidity and stand forth in the sun once more. And having assured himself that his nose, fingers, and toes have passed unscathed the ordeal of Boreas and are good for another season, and having congratulated his brother, the snow bird, on similar good fortune, the thing that should appeal most warmly to his newly awakened perceptions is the State Society, which is to meet in the flood-tide of summer, and which will require his presence, and his contributions to its proceedings if the coming session is to be as successful as its sessions are wont to be.

The above may be taken as a paraphrase of the following communication from our indefatigable secretary:

To the Editors of the American Practitioner and News:

The forty-first annual meeting of the Kentucky State Medical Society will be held at Lebanon, beginning on Wednesday, June 10th, and continuing through the 11th and 12th. The Chairman of the Committee of Arrangements, Dr. R. C. McChord, has gathered around him an able corps, and they hope to make this annual gathering a memorable one.

Any member of the Society or of the regular profession within the confines of the State, or those who desire to make exhibits at this session, wishing information, may receive the same by addressing the Chairman of the Committee of Arrangements and Credentials, at Lebanon. The Secretary is glad to announce that a general interest is already awakened, the titles of many papers from representative men having come to this office, and he can assure the profession that it will be a pleasure to attend the "forty-first," both for the mental pabulum which the papers and discussions will afford, and also for the social enjoyment and good fellowship which will luxuriate on this occasion.

STEELE BAILEY, M. D.,
Permanent Secretary.

And the literal translation of it all is: *Thaw out and go to work!* This is the keynote of the coming chorus which we trust will soon be in full rehearsal.

THE UNIVERSITY OF LOUISVILLE.

The commencement exercises of the Medical Department of the University of Louisville will take place in Macauley's theater on Monday, March 30th, at 2 o'clock P. M.

The occasion will be one of "joy mixed with sorrow," in view of the fact that it is to be the memorial of the death of the brilliant and beloved Prof. Palmer. The address will be delivered by his life-long friend, colleague, and former office partner, Prof. H. A. Cottell.

A feature of great interest will be the alumni address on "Doctors and Doctors," by Dr. C. M. Rosser, Superintendent of the North Texas Insane Asylum. Dr. Rosser is a brilliant son, and reflects much honor upon his *alma mater*. As a student he won the Whitsitt prize for the best medical essay, and since his graduation he has by pen and on the rostrum achieved distinction among the rising physicians of the day. His fostering mother is proud of him.

Dr. Rosser has been requested to deliver one of his popular lectures on Alienism at the University during the college closing week. Of these lectures the Gross Medical College Bulletin, of Denver, Colorado, says:

DR. C. M. ROSSER.—It is rare that a class of medical students has the

After repeated invitations Dr. Rosser very kindly consented to give our students the benefit of his wide experience as an alienist, and in a course of **six** lectures delivered a most concise as well as comprehensive discourse upon insanity.

Dr. Rosser is a man of magnificent address and eloquence; his early literary as well as medical training fit him for teaching in a more than ordinary manner.

Notes and Queries.

OUR LIMITED VISION AND THE NEW PHOTOGRAPHY.—When Mr. Samuel Weller on a memorable occasion said, "But, you see, my vision's limited," he uttered a profound and general truth which at the present time is being very keenly felt and realized. The discovery of the X rays is mainly responsible for this. Now that it has been shown that it is possible to take photographs with "dark light" it is obvious that we must attach a deeper and much wider meaning to the word light than has hitherto been ordinarily understood. The fact is, to paraphrase Mr. Weller's expression, the eye is able to see very little. It can appreciate and turn to account in producing an impression upon the retina but a very limited proportion, barely more than an octave of the waves or vibrations that may actuate the ether or medium which pervades all space. The ear is a more sensitive instrument for sound-vibrations, since most people can appreciate the notes within the compass of a piano, but even here there must be a limit. Some persons can not recognize the extreme top notes or rapid undulations until the tension of the strings is reduced, when the note is appreciated, having been brought down to the level of the ear's capacity and the vibrations reduced in frequency. In the same way the photographic plate has brought within our vision countless stars which the eye, even aided by the telescope, fails to see. The sensitive plate, in other words, records infinitely more than the eye, and this property is utilized to bring things within the range of human vision. So it is with the X or Roentgen rays, and doubtless there are other rays which have a greater penetrative power. Opacity is, indeed, a phenomenon existing merely for an eye like ours, which if constructed a little differently would enable us to see easily through walls. Perhaps it is a wise provision that it is not so. The fact that photographs may and have been taken with no apparent source of light at all appears to be due to the property of probably most things of absorbing certain rays and giving them out again in the dark. Thus, if a transparent photographic proof has been freely exposed to the light and then taken into the dark room and placed over a sensitive plate for some time, the plate on development will give a distinct negative image. The same thing is illustrated in a stronger

manner in luminous paint, which absorbs light and gives it out again so that it is visible to the eye in the dark. We have heard some people assert that on reading a paper closely in a railway train which is just rapidly entering a tunnel they are enabled to read on for quite a few seconds or so in spite of the darkness. This, however, may be persistence of impression, but it is quite possible that it is due to the paper giving up the light which it had absorbed.

The photography of substances embedded in the hand or knee by means of the X rays has now become quite a common accomplishment, affording an aid, although it must be confessed a limited aid, to surgical exploration with the view of extracting foreign bodies. Several authenticated cases of the sort were reported this week at home and abroad. But it is evident that the conditions of the experiment must be vastly improved before the X rays can be brought successfully to bear upon surgical operations. Some means of concentrating the rays are wanted, and the time of exposure is necessarily and inconveniently long, according to the degree of thickness of the part operated upon. During this time the Crookes tube frequently breaks down, and the exposure of a patient keeping perfectly still for, say, three hours, is almost an impossible ordeal. We do not despair, however, that the method will undergo improvement which will bring greater convenience to the operator and comfort to the patient.

We referred last week to the discovery of Prof. Salvioni, of the University of Perugia, who, it is reported, has been able to make directly visible the bones of the hand by means of the X rays. His procedure appears to be to interpose the object between the source of the rays and a screen capable of being made to phosphoresce, so that the rays which get through actuate the screen to emit light while where the rays are absorbed or stopped as by the bones a clear and true shadow is produced. Such a substance apparently is the platino-cyanide of barium. How the screen is conveniently viewed is, however, not quite clear, but we apprehend that further details will be soon forthcoming in regard to the construction of this apparatus, which has received the name of "cryptoscope." It is in this direction, we think, in which the application of the X rays may become of signal service. In the mean time it is pretty clear that our views of the nature of light must undergo considerable modification. There seems little doubt, however, that the new phenomenon belongs to electricity rather than to light. *Lancet.*

THE PHYSICIAN'S RELATION TO SOCIETY.—The following admirable passages from President Eliot's address before the Medical Society of the State of New York is an excellent statement of the advantages which the modern physician's training and work give him as an adviser against moral and social evils to which society is subject. He says:

"The trusted physician sees intimately many classes of society, whether he live in the country or in the city. In the city he sees the well-to-do in

their houses and the poor at the hospitals and dispensaries. In the country he visits all the different kinds of people in the town. The experienced physician is familiar with the causes of poverty and misery, and he is equally familiar with the ill-effects of wealth and ease unaccompanied by mental and spiritual cultivation. He can recognize the socially normal and the socially abnormal, and distinguish unerringly between them. In the city he knows the evils which result from crowded tenements and dark, ill-ventilated working places; in the country he knows all about the wet cellars in which decaying fruits and vegetables are stored; the bad cooking; and the careless disposition of the household sewage on the surface of the ground near the dwelling. He should be the best adviser on all social defenses against the physical evils which the greed, ignorance, or carelessness of individuals inflict on the community; on the building of hospitals, large or small, in city or country; and on the training of competent nurses, whether for hospital or family service. The physician should be the chief defender of society against the superstitions which still prevail and the impostures which still thrive. This training being essentially the training of a naturalist, he should be the defender of the community against all forms of unreason. If the physician have the needed persuasive force, no one can defend society so effectually as he against those unreasonable persons who are constantly protesting against dissection, vaccination, and vivisection; for no one can understand so well as the physician the benefits which these processes have conferred upon the human race."

With regard to the medical profession as a career for young men, President Eliot says:

"The medical profession has before it an entrancing prospect of usefulness and honor. It offers to young men the largest opportunities for disinterested, devoted, and heroic service. The times are past when men had to go to war to give evidence of endurance, or courage, or capacity to think quickly and well under pressure of responsibility and danger. The fields open to the physician and surgeon now give ample scope for these lofty qualities.

"The times are past when the Church alone asked men to devote themselves patiently, disinterestedly, and bravely to the service of their fellow-men. The medical profession now exhibits in highest degree these virtues. Our nation sometimes seems tempted to seek in war—that stupid and horrible savagery!—for other greatness than can come from vast natural resources, prosperous industries, and expanding commerce. The pursuits of peace seem to pall for lack of risk and adventure. Would it might turn its energies and its longings for patriotic and heroic emotion into the immense fields of beneficent activity which sanitation, preventive medicine, and comparative medicine offer it! There are spiritual and physical triumphs to be won in these fields infinitely higher than any which war can offer; for they will be triumphs of construction and preservation, not of destruction and ruin. They will be triumphs of good over evil, and of happiness over misery."—*Boston Medical and Surgical Journal*.

A HARD CASE.—*Le Scalpel*, a very ably edited Belgian medical journal, now in its forty-ninth year, relates the following case as a warning to surgeons against *trop de zèle*. A practitioner of Brussels had a patient who was suffering from a uterine affection. A specialist having been consulted, curettage was recommended and agreed to both by the woman and her husband. She accordingly entered an institution in order to undergo the operation, but while it was in progress the surgeon became aware, after dilatation of the cervix uteri, that he had to do with carcinoma. The patient being under the influence of an anesthetic and the husband absent their consent could not be obtained; but the operator nevertheless decided to perform hysterectomy on his own responsibility. All at first went well, but unfortunately the woman died subsequently from hemorrhage, whereupon the husband sued the practitioner, claiming damages to the extent of 50,000 francs for the loss of his wife. The Ministry of Justice came to the conclusion that 5,000 francs would suffice; but at the time of writing judgment had not yet been pronounced. The case points to the inadvisability of performing such an operation as hysterectomy without the consent of the patient and her husband having been previously obtained. In the above case there is no reason why the operator, having ascertained the nature of the disease after dilatation of the cervix, should not have waited a few days before proceeding to remove the uterus.—*Lancet*.

PROFESSIONAL CRIME.—What to do with our criminals has always been a *vexata questio*, and will be, we fear, for yet awhile. Any attempt, therefore, to solve the problem should receive careful consideration. Much may be said in favor of the system adopted at the Elmira Reformatory in the State of New York, where prisoners are kept until they are morally, intellectually, and physically capable of earning a living when they are discharged. This system, however, *per se* can only be successfully adopted in the case of those who have a moral sense of wrong-doing and are capable of reformation, otherwise much can be said against it. It can in no way benefit the habitual criminal, and this is the very class in dealing with which the most serious difficulties are met. With reference to this class Mr. R. Anderson, C. B., has an able article in the current number of Blackwood's Magazine. He starts by propounding the question: "Why do we imprison our criminals?" and answers it by asserting that no transcendental obligation to punish wrong-doers is recognized by our law as now-a-days administered, and that the main consideration with the judge is not the guilt of the criminal, but the need of the community. He then proceeds to argue that habitual criminals should be dealt with by the State in a manner similar to that in which it has dealt with infectious diseases, namely, by removing or checking the causes which tend to produce or spread the disease, patients being isolated until they can mingle with their neighbors without danger to the public health. Mr. Anderson pleads that the same enlightened principles which now obtain in regard to sanitation may be applied to crime, and advocates

the dealing with such criminals as have proved themselves to be morally incapable in a way similar to that in which we now treat lunatics, keeping them under perpetual observation and restraint until cured. That our present methods of dealing with criminals is sadly in need of some reform there can be no doubt, and granting that the welfare of the community is the ruling factor in the problem under discussion the plan suggested by Mr. Anderson is at least logically sound. With the suggestion that the antecedents of all prisoners should be fully gone into and the sentence tempered accordingly we are in full accord. The whole article will repay careful perusal.

Dr. Nathan Oppenheim in the *Popular Science Monthly* (New York) has a thoughtful paper on the Stamping out of Crime. He asks for the complete isolation of the criminal in order that he may be prevented from perpetuating his species. One of the best indications for hope, he thinks, is the growing effort to study crime accurately, not merely to regard it as an excuse for confining lawbreakers in self-infecting herds, but to seek for the causes of crime, to ascertain all its concomitant conditions, to recognize and classify the criminal in sociological, psychological ways—in the ways of anatomy and physiology.—*Ibid.*

JAUNDICE AFTER LACTOPHENIN.—Strauss (*Therapeut. Monatsch.*, September, 1895,) deals further with the effects of lactophenin. Cases have been reported in which troublesome sweating and also irregularity of the heart followed its use; in two cases rashes have been seen, apparently due to lactophenin. He now reports three cases of catarrhal jaundice which seemed to be due to the same cause. In each case the drug was being administered for neuralgia, and a dose of one grain was being taken four times *per diem*, the length of time before the jaundice appeared varying from fourteen to twenty-one days from the commencement of the treatment. The jaundice appeared to be of the ordinary catarrhal type, the stools being white and the urine bilious. Experiments on dogs showed intense congestion of the stomach and duodenum after administration of lactophenin, but no jaundice; similar congestion was observed by Lewin after the use of phenacetin, which has also been followed by bilious urine. It is suggested that these facts may point to catarrh of the duodenum as being the cause of the jaundice after lactophenin.—*British Medical Journal.*

THE CRYPTOSCOPE.—At a meeting of the Perugia Medico-Chirurgical Society held on February 5th, writes the Rome correspondent of the *British Medical Journal*, Prof. Salvioni, teacher of physics at the university, made a most important communication on the new results obtained by him in Roentgen's rays.

In studying the question, his aim was to invent an apparatus which would enable one to see direct and without the intervention of photography certain bodies inclosed in wood, flesh, cardboard, etc. He therefore

studied the possibility of rendering the retina sensitive to Roentgen's rays. In this he has succeeded by inventing an apparatus which he has called a cryptoscope, which he exhibited at the meeting, and by means of which one can clearly see the contours of the bones of one's own hand, objects inclosed in cardboard boxes, leather purses, etc. This apparatus is very simple, and consists of a black cardboard tube inclosed at one end with a disc of black cardboard coated internally with a fluorescent substance (barium platino-cyanide, sulphate of calcium, etc.); in the other end is placed a lens which permits one to clearly see the fluorescent surface. The object to be observed is placed before the luminous source given by a Crookes tube, and then one looks at it through the cryptoscope placed at the proper distance. As in the fluorescent cardboard the parts of the object impermeable to Roentgen's rays are thrown into a shadow, thus one sees the contours of the bones of the hand, etc. A model of the instrument was made under the direction of Prof. Blasema at the Physical Cabinet of the Roman University on February 11th, and with it one could clearly see the bones of one's own hand, coins in a purse, or the clenched hand, etc. It is evident from these results that the apparatus, when perfected, will be of great use in medicine and surgery.—*Boston Medical and Surgical Journal*.

FOOTBALL CASUALTIES.—A young man, aged twenty-four years, who received injuries while playing a match on September 1st last, at Fallowfield, between the St. Mary's (Hulme) and Ladybarn teams, and subsequently taken to the Manchester Infirmary, died there on December 28, 1895, from a fracture of his spine. While playing at Chester recently one of the Glossop forwards was removed from the field suffering from concussion of the brain. A young man aged nineteen years, of Ombersley, died in the Worcester Infirmary on December 31st from injuries sustained in a match on the previous Saturday. While playing at Hoylake, on the 28th ult., for the Heswall against the Hoylake team, a young man fractured his leg and was conveyed to the Birkenhead Borough Hospital. In a Northern Union match at St. Helens, Liverpool, on the 1st inst., between the St. Helens and Manningsham teams, the captain of the former team sustained a "twist in the knee" and injury to the ankle.—*Lancet*.

PREGNANCY IN GIRLHOOD.—Spitta (*Inaugural Dissert.*, Marburg, 1895,) has reviewed the clinical history of two hundred and sixty labors in primiparæ of eighteen and under, as observed at the Marburg Maternity. The general health during pregnancy is not worse than the average among pregnant women. Delivery before the fortieth week was relatively frequent. The pains are often weak, the labor tends to linger. In many cases of deficient capacity of the pelvis in these patients the defect simply implies that they are not full grown. The most frequent positive evil in relation to labor in early girlhood is laceration of the soft parts. Vertex presentation are relatively frequent. Floodings during labor are common. The

mortality of the child during parturition and the first two weeks is not high. The proportion of male births increases with the age of the mother. The forceps is often required. Affections of the mammæ are common. Mortality is by no means high. A history of menstruation coming on early is favorable in a case of pregnancy in a young subject.—*British Medical Journal*.

GYPSIES' TENT LIFE.—A remarkable story was told at an inquest at Portsmouth on January 1st. A child had been overlaid, and the coroner's inquiry elicited the fact that a family of eleven persons lived in a tent in a brickfield. The tent was 16 x 12 feet. The father and mother and the infant occupied one third; a daughter, aged nineteen, who had an infant eight months old, and said she had never been to school, took up another part, together with seven brothers and sisters. There was a coke and coal fire in the middle, the smoke going out of a hole in the top. The girl said she was present when the child was born, but "the children were turned out." She said there was no curtain, but the father said the place was partitioned off into "two bedrooms and a kitchen in the middle." The inhabitants, it should be added, slept on mattresses on the floor. A medical man who had visited the tent said it was fairly ventilated, and that the overcrowding had nothing to do with the death.—*Lancet*.

THE CORNELL BRAIN ASSOCIATION.—This singular association apparently has for its object the *post-mortem* study of the effects on the human brain of education and good morals. At least we learn from the daily press that Dr. Wilder of this association has made another appeal to educated and moral persons to bequeath their brains to the institution for scientific study. In response to this letter the society has already received eight brains, and has the promise of twenty-five others, which are as yet being used by their owners. These latter include the brains of Thomas K. Beecher, of Elmira, and Mrs. McGee, daughter of the astronomer Simon Newcomb. Apparently no brains of immoral or uneducated persons can be used by the association, though it would seem that a few of the latter classes might prove of advantage for purposes of comparative study.—*Boston Medical and Surgical Journal*.

THE JOURNAL OF EXPERIMENTAL MEDICINE.—The first number of the first volume of this new periodical, under the editorship of Dr. William H. Welch, has made its appearance. It contains an introduction by Dr. Welch and seven original articles, two of these with illustrations. None of the articles can be said to be in any sense popular, but they indicate a high standard of careful and accurate scientific research as that which has been set for the new periodical by its able editor. The paper and press-work are of the best. It is proposed that at least four numbers of this journal shall appear during the year, but there will be no fixed date of issue, and a number will be published whenever sufficient material is ready. Each volume will contain from six to eight hundred pages.

Special Notices.

GEO. W. SAMUEL, M. D., Nashville, Tenn., says: I had a case of a man who had been drinking heavily for several days. I prescribed Celerina in tablespoonful doses every three hours, and in a short time he was in good shape again. I also used it in a case of neuralgia in the following formula:

R. Celerina, 8 ounces;

Quinia Sulph., 60 grains.

M. Sig.: Teaspoonful every four hours.

It acted like a charm. In a case of impotency I used calomel in connection with Celerina and the patient reports every thing standing all right.

A CARD.—We have frequently received communications from physicians asking us to give the digestive powers of Seng in numerals. As Seng is not an artificial digestant, but a digestive secernent, this is, of course, impossible.

We therefore desire to correct this erroneous impression with the statement that Seng, through its secernent action, encourages the flow of nature's own pepsin when taken into the stomach, and thus does not dissolve the food *per se*.

The physiological difference between the pepsin and Seng treatment is that the former is an artificial treatment and a makeshift at best, while the latter is a restorer of the natural functions of digestion.

SULTAN DRUG CO.

I AM slow to give an opinion until it is justified by conviction. Continued trial of Peacock's Bromides in nervous disorders where the compounds of bromine are indicated, has resulted in a full recognition of the decided superiority of your preparation over any of the bromides singly administered. In efficacy and promptness of action, regardless of idiosyncrasy and other conditions, Peacock's Bromides excel in such a degree that when they are within reach I never prescribe or employ the bromides in any other form.

A. B. C. CLEMENTS, M. D., Washington, D. C.

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THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXI.

LOUISVILLE, KY., MARCH 21, 1896.

No. 6.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

DIFFUSE SEPTIC PERITONITIS.

BY A. M. CARTLEDGE, M. D.

Diffuse septic peritonitis of Mikulicz, general septic peritonitis, and peritonitis mykotica are synonymous terms to express a pathological lesion characterized by a more or less sudden and profound impression on the peritoneal sac, followed by a rapidly extending inflammation with no tendency to limitation or to become circumscribed. The formation of fibrinous deposits either does not occur or are liquefied by the action of pathogenic bacteria and ptomaines. Pathogenic bacteria have been constantly found present in this form of peritonitis, the colon bacillus predominating. Where the ordinary pathogenic bacteria, the staphylococcus and streptococcus pyogenes have been found, their presence can generally be traced to diffuse peritonitis springing from some local or circumscribed inflammation which was excited by and contained these organisms. This inference is based upon the knowledge that pure cultures of the ordinarily harmless colon bacillus brought into contact with injured or diseased peritoneum, at once displays most intense pathogenic qualities and is capable alone and unmixed of producing rapidly fatal peritonitis; indeed, so acutely fatal is the inflammation from this source of infection that there is not time in most cases for the development of a secondary infection in the wake of the pathologic field.

The most complete yet concise classification of the etiology of diffuse septic peritonitis that I am acquainted with is the table of Dr.

Richard Douglas, embraced in a paper read by him before the Southern Surgical and Gynecological Association in 1894. I can not do better than quote it in full :

Infection from without. .	Immediate. .	{ This is direct infection of the peritoneal membrane through penetrating wounds of the abdomen either accidental or surgical.
	Mediate. . .	{ This form embraces all cases of contamination of the peritoneum occurring from extension of adjacent infected areas, as leakage from mural abscesses or puerperal infection.
Infection from within. .	Immediate. .	{ Visceral perforation or rupture and direct inoculation of the peritoneum with escaping contents, as in perforating typhoid or gastric ulcer, appendicitis or rupture of gut or bladder.
	Mediate, . .	{ Infection by emigration of micro-organisms through visceral walls of impaired resistance, as in incarcerated hernia, intestinal obstructions, ruptured ovarian cysts.

Thus it will be observed that a diffuse septic peritonitis may be such from the beginning, as when septic matter is introduced into the sac, as in a filthy knife wound or a ruptured bowel from trauma or gunshot wound, in which fecal matter is poured into the undefiled peritoneum; and again, and most frequently, it is secondary to a pre-existing circumscribed or local peritonitis, in which the infected contents of such local inflammations have been suddenly poured upon this great lymph sac. Lastly, the source of infection may be immediate both from without and from within, as when a septic knife blade enters the peritoneal cavity laden with sufficient septic material from without to cause a fatal diffuse inflammation and further wounds the intestine, which in turn pours from within sufficient (though probably differing bacterially) septic material to insure a diffuse septic peritonitis.

Whatever be its origin, the symptoms though varying in intensity are uniform and well marked, and the termination of the disease is characterized by fewer variations than any other we are acquainted with.

The life-history of diffuse septic peritonitis is quickly told. A history of abdominal trauma, either accidental or surgical, or intra-

tering around the umbilicus; unmistakable shock in the cases due to the sudden pouring out of septic contents into the free cavity; cold extremities; feeble pulse, at first not accelerated; subnormal temperature. In a few hours, say from four to eight, these cases react and present the classical symptoms which attend all cases, be the cause what it may. What physician has not been a helpless witness of this unconquerable array of symptoms? the pallid face and pinched features; the bright and searching eye, which reveals the mind intoxicated to a degree of brilliancy beyond the natural; the quick and meaning question; the restless and excited nervous system; the unquenchable thirst. Add to these the objective symptoms: a rapidly ascending, thready pulse, sometimes increasing ten beats to the minute during half an hour's observation; tumefied and uniformly distended abdomen; the destruction of abdominal breathing; the cold surface and extremities; the projectile vomiting—and you have the picture complete of a pathologic lesion that we must believe with Treves has but one termination, and that is death.

Treatment to avail must be early and very radical and thorough. It must be at least partly preventive, for once the disease is established it is beyond the reach of human aid. Nearly all cases when first recognized are beyond the bounds of possible relief. We may hope to lessen the number of cases of diffuse septic peritonitis by early relieving conditions which are prone to give rise to it, but from the dark and gloomy field of its pathology there does not arise a single gleam of light which would cause us to believe it can ever be cured when once established.

The rapid denudation of endothelial surface in this disease together with the speedy absorption of the products of bacterial growth in luxuriant surroundings, when the disease is once under way, act like the injection of the alkaloid of some pronounced poison in the blood. The cerebral hyperemia with augmented intellect, the nervous agitation, all speak of ptomaine poison from the great peritoneal supply-house. In virulent cases the intestinal coats, including the mucosa of the entire intestinal canal are congested and rapidly become paretic long before the inflammation could possibly have extended by continuity to such a vast surface. After devoting considerable study to the subject, the explanation of this seems twofold. It is a well-known fact that a traumatic or septic impression of the peritoneum calls forth the colon bacillus which normally inhabits the intestinal canal, and they have been found by

Cornil and other observers penetrating the muscularis prompted by a disturbance upon the peritoneal side of the bowel. In diffuse septic peritonitis this activity of the colon bacillus may extend to the entire intestinal canal as the result of such a pronounced and specific impression at one part as occurs in diffuse septic peritonitis. Again, the absorption and circulation of ptomaines may produce in the intestinal coats, as in the brain and kidneys, first vasomotor dilatation and ultimately paresis. For the patient dying of diffuse septic peritonitis usually passes into coma a short time before death.

In concluding this part of my paper it seems pertinent to offer the following deductions from what has been said :

1. Diffuse septic peritonitis is a bacterial disease, the most frequent organism being the colon bacillus.

2. The conditions most commonly productive of the disease are rupture of circumscribed septic accumulations from adjacent or intraperitoneal structures into the fresh and undefiled peritoneum. Such septic inflammatory accumulations are in the order of causative frequency based upon the table of Macagnai's ruptured appendices and appendicular abscesses, typhoid fever, ulcerative enteritis, intestinal perforation, cancer of the colon, hernia, thrombosis of mesenteric vessels, ulceration of gall-bladder. Macagnai's observations evidently did not extend to diseases of the female pelvic organs, or most probably he would have placed rupture of tubal abscesses and suppurative ovarian cysts second in this etiological classification.

3. Diffuse septic peritonitis can usually, even in its inception, be differentiated from circumscribed peritonitis though the latter be accompanied with marked general disturbance of the abdomen, such as tympanites and pain. The prognosis in the two affections is widely different.

4. Obstruction of the bowels coming on during a severe circumscribed inflammation of the peritoneum is due usually to paresis from adhesion of coils of intestine to each other and to neighboring structures by fibrinous deposits. If not too extensive careful separation and removal of the cause of local peritonitis will usually terminate in recovery.

5. Obstruction of the bowel in acute diffuse peritonitis is caused by vasomotor paresis of the muscular coats of the bowels, and never by adhesions except at some local point where there was a pre-existing circumscribed peritonitis. Treatment by operative or remedial measures offers no hope of recovery.

6. Diffuse septic peritonitis is always acute and is to be distinguished from circumscribed peritonitis and from fibrinous or adhesive peritonitis, which sometimes follows the injection of a non-septic fluid, as blood, or following the contusions of a trauma. These last are the ones that get well by rest and opium.

7. Our present knowledge, based upon the work of Treves and fortified by the experience of many surgeons, leads us to believe that diffuse septic peritonitis is always fatal whether subjected to operation or not.

Like every surgeon, who has done abdominal work to any extent, the saddest page in my record book is the one which records the laparotomies performed in the presence and for the relief of this monster. I shall not report them at length, for the story of one is about the story of all. I append some fatal cases not operated upon, in order that rational comparisons may be made, and in order to prove that my experience has not been different from that of others in dealing with this frightful malady. Had I to treat the cases enumerated below, with my present experience, I should refuse operation in most of them, as I now know they would all have died in any event. Nothing has done so much to bring operations into disrepute, especially in disease of the vermiform appendix, as the operations undertaken in cases hopeless from the beginning. And yet when confronted with these cases in practice it is not so easy, in the presence of what your knowledge teaches you is certain death, to say that you will make no effort to stay the advance of this dreadful disease, diffuse septic peritonitis. Yet the rational deduction born of experience proves that by operating upon one such hopeless case we probably lead some very easily relieved case to reject operation until it is too late.

CASE 1. Boy, age twenty, fell in an open hatchway; got out without assistance; complained of pain in right inguinal region. He went home and to bed. The family physician was called, and treated him for bruise of side for five days. On the night of fifth day he was seized with violent pain in abdomen, cold extremities, feeble pulse. I saw him fifteen hours later. Pulse 120, thready; abdomen swollen; thoracic breathing; pinched features. Diagnosis not made; probably some serious abdominal lesion. Exploratory laparotomy; median incision. Abdomen filled with pus, loose between the coils of intestine. Necrotic appendix in abscess cavity, which had ruptured into free cavity. Irrigation; drainage; death in thirty hours.

CASE 2. Boy, age twelve years (Dr. Krim), was struck with a snow ball two days before. Great pain and shock followed by fever and general peritonitis. When seen was in advanced diffuse septic peritonitis; almost moribund; pulse 150. Median section; pus in free cavity; general diffuse peritonitis. Abdomen closed rapidly after irrigation to get him off table. Death in eight hours. Autopsy by Dr. Weidner: Diffuse septic peritonitis; ancient inflammatory mass in right iliac region; diseased appendix. The appendicular abscess had evidently been ruptured by the ice ball striking it and gave rise to a diffuse peritonitis. Dr. Krim found that the boy had been treated some months before for typhoid fever, which lasted ten days or two weeks.

CASE 3. Boy, age fourteen years, was seized with pain in right side which lasted a day. The pain improved, but abdomen rapidly swelled. Attending physician gave several cathartics during the following forty-eight hours; no response. Diagnosis, intussusception. I saw him on the evening of the third day. Abdomen much distended; vomiting large quantities of green-tinged serum; pulse 140; temperature 98°. Diagnosis, intestinal obstruction. Operation in median line. Diffuse septic peritonitis; lymph flakes, and turbid serum; congested and paretic bowels. Investigation of right iliac region revealed a gangrenous and perforated appendix; no limiting adhesions; no abscess. Death in twelve hours.

CASE 4. Widow, age about thirty-eight (Dr. Stucky), had suffered periodically with pain in right inguinal region; had been treated by various physicians; was seized with intense pain in right inguinal region while ironing; great shock; abdominal pain. Was seen by Dr. Stucky the following morning; abdominal distension; pinched features; temperature 102°; pulse rapid. Diagnosis, probably ruptured appendix into free peritoneal cavity. Later in the day she was removed to the infirmary. I saw her at 3 P. M.; concurred in the probable diagnosis. She was manifestly worse than when Dr. Stucky first saw her. Pulse 140; temperature 98°; extremities cold. Median section at 5 P. M., twenty-four hours after onset of symptoms. General septic peritonitis; lymph flakes; turbid serum; congested intestine. In right side appendix found attached to enlarged right fallopian tube, but sound; the right tube contained a perforation the size of a grain of corn from which leaked a quantity of dirty pea-soup looking pus into the free peritoneal cavity. Tube removed; irrigation of cavity with gallons of water, and drainage. Death in twelve hours.

CASE 5. Boy, age about fifteen; had an attack of appendicitis two years before the present trouble for which I treated him. As the symptoms at that time were not marked he was treated by the expectant plan and seemed to recover. The second attack came on after eating rather heartily of pineapple on Saturday night. The pain was right severe at the onset, but was relieved by the administration of morphine and hot applications. As he had gotten over the first attack, I decided to treat him as then. The second day he seemed to be doing fairly well; pain had diminished; temperature was about 102° . He rested very well the early part of Sunday night, but was seized with severe pain about 5 o'clock Monday morning. The pulse rapidly ascended and the abdomen began to distend. An anxious expression developed, and all symptoms of a diffuse septic peritonitis appeared. An operation was deemed the only hope for recovery. Operation in right semi-lunaris; no adhesions; lymph flakes and curdy pus about appendix, which was enormously enlarged and perforated. Appendix was in a partial state of gangrene. Cleansing and drainage by gauze. This little fellow made a wonderful struggle against the advances of so septic an inflammation, and at one time, some twelve hours after the operation, looked as if he would recover; but the distension returned, and death terminated in the usual way from septic infection and intestinal paresis.

CASE 6. Man, age about thirty-eight years, patient of Dr. Ritter. This man had a history of repeated attacks of intestinal colic and soreness. Was seized with pain in abdomen; went to a physician's office and was prescribed for. Was no better next day; complained of soreness in abdomen; slight swelling; temperature 102° . Dr. Ritter gave him a cathartic. Thursday he was much worse; cathartic had not acted; vomiting; more abdominal distension; suspected intestinal obstruction. I saw him with Dr. Ritter at 4 P. M. end of second day. He had grown rapidly worse since the last visit; extremities cold; temperature 99° ; pulse 120; vomiting frequently large quantities of green-tinged serum; great thirst; little pain; abdomen too much distended to localize trouble. Diagnosis, either organic intestinal trouble or rupture of appendix. If the former, a chance for life; if the latter, none. Operation—median incision; general septic peritonitis; gangrenous and ruptured appendix. Death in eight hours.

CASE 7. Dr. Hamilton was called; he diagnosed appendicitis, with abscess. Immediate cause of my being called was that the fever had subsided, but abdominal distension was greater and pulse faster. His

temperature was 98° when I saw him, and he was more comfortable than at any time during six days. His pulse, however, was 120 and thready, and distension was rapidly increasing. Diagnosis easy, rupture of an appendicular abscess into the general peritoneal cavity. Operation; beginning diffuse septic peritonitis from a ruptured appendicular abscess. I thought this man had a chance, but he died in two days.

These do not represent all the cases of diffuse septic peritonitis I have operated for. I have operated upon and lost as many more arising from gunshots of the abdomen, strangulated hernia, intestinal obstruction, etc. One point prominent is that every case of laparotomy that I have done, where diffuse septic peritonitis existed, it matters not from what cause, died. In this connection I will here report some cases which strikingly resemble those detailed, and in which no operation was done, and they died also.

CASE 1. The wife of a dentist, forty-five years of age; history of repeated attacks of jaundice. Seized with severe pain in abdomen, vomiting, and purging; was treated a few days, but rapidly grew worse; abdominal distension increased; died at end of fourth day. *Post-mortem* revealed abdomen filled with pus and large appendicular abscess ruptured into general cavity.

CASE 2. Man, forty years of age; history of repeated attacks of colic. He was a perfect type of physical development; went out to a party one evening—was seized with severe pain in the right side. Next day at noon abdomen was rapidly swelling; developed pinched features, rapid pulse, and died at end of third day. The inference is that he died of a ruptured appendicular abscess.

CASE 3. A boy, seen with Dr. Allen. He had a well-defined appendicular abscess which on the fifth day ruptured. He developed general peritonitis, and died after five days.

CASE 4. Was seen on St. Catherine Street with Dr. Pelle. Rupture of appendicular abscess took place on the third day. It seemed to be a case that would get well, and the doctor had discharged her.

CASE 5. I went forty miles out in the country to see a physician's son. This boy had been stacking hay and a storm came up. In his anxiety to get off the hay stack he fell and hurt his hip it was thought. The doctor examined his hip, but could find nothing wrong with it. After three or four days he developed fever and swelling of the abdomen. When I saw him he was hopelessly in general peritonitis. On questioning the boy I got a clear history of repeated attacks of appendicular colic.

Again, these do not represent all the cases of diffuse septic peritonitis not operated upon which I have observed to die. There are probably as many more from trauma, hernia, intestinal obstruction, etc. In all I have attended about thirty cases of diffuse septic peritonitis. Of this number about fifteen were operated upon in the hope of relieving the condition upon which they depended, but without avail.

LOUISVILLE.

FIFTY APHORISMS ON ALCOHOL.

BY E. J. KEMPF, M. D.

Aphorism 1. By alcohol is meant the representative of a class of chemical compounds having in common certain characteristics.

2. Alcohol is produced by fermentation of saccharine substances, from which it is separated by distillation.

3. Alcohol is a transparent, colorless, mobile, and volatile liquid of a characteristic pungent and agreeable odor and burning taste. Specific gravity 828.

4. Fusel oil, an amylic alcohol, an oily, nearly colorless liquid, is an impure and very poisonous substance.

5. Whisky is made of corn, wheat, or rye, by distillation of the fermented grain. It has an amber color, a distinctive taste and odor, and its specific gravity is 930. Whisky varies in the amount of fusel oil it contains.

6. The following table is accepted as reliable concerning the per cent of alcohol contained in alcoholic liquors commonly sold and used:

Brandies, gins, and whiskies,	48 to 56 per cent.
Sherry and port,	20 to 33 "
Claret and hock,	8 to 11 "
Ale and porter,	6 to 10 "
Beer,	4 to 6 "
Stout,	4 "
Sweet wine,	10 to 17 "

7. Fifteen grains of alcohol per two pounds of the body-weight is considered the limit per day for health; 30 grains of alcohol per two pounds causes intoxication; and 120 grains per two pounds will cause death in from twenty-four to thirty-six hours.

8. The physiological action of all alcoholic liquors does not differ from pure alcohol in the same stage of dilution. But pure alcohol diluted is less toxic than impure whisky, or any other impure alcoholic

drink. Brandy being a purified wine is in a diluted state less toxic than the wine. Alcoholic liquors may be adulterated in such a way that they are more toxic than pure diluted alcohol of the same per cent. Red wine is more intoxicating than white wine, not because it contains more alcohol, but because the latter is produced by the fermentation of the grape juice, whereas the red wine is the product of the juice, skin, and pips of grapes.

9. The physical constitution, the stage of health, and the condition of the mind have much to do with the quantity of alcohol a person can stand.

10. There are conditions and diseases occurring in the human system when alcohol may be used as a medicine and as a food, and proves of great benefit, often saving life if properly used.

11. In some conditions, such as poisoning from snake-bites, large quantities of alcohol can be taken into the system without causing any effect except counteracting the poison already in the system. In such cases it acts as an antidote.

12. In other conditions, such as the rheumatic diathesis, the smallest quantity of alcohol is hurtful to the human system. For this reason the physician makes it a point to forbid rheumatic patients all alcoholic liquors of any kind or in any quantity.

13. The toxic quality of alcoholic drinks is not thoroughly evident when there is no kidney nor liver trouble, nor a diathetic disease. Healthy subjects easily eliminate these toxic substances, which under certain circumstances may even be valuable as occasional stimulants. In other words, death does not readily occur from the acute toxic effects of alcohol unless there is some constitutional defect.

14. The greatest portion of alcohol taken is used up in the system. Only about sixteen per cent, even if taken in large quantities, is excreted through the breath, the skin, and the kidneys.

15. Alcohol, it is supposed, is stored up in the system. It has been found in the ventricles of the brain, and has been distilled from the brain substance.

16. In small doses alcohol increases the action of the heart and cutaneous circulation; a slight rise of temperature is observed and all the functions are for a time stimulated.

17. A considerable dose of alcohol exhilarates, excites, and slightly intoxicates.

18. A large quantity of alcohol causes loss of muscular power, impaired co-ordination of voluntary movements, and rambling incoherence.

19. A poisonous dose of alcohol produces profound insensibility, stertorous breathing, and muscular resolution. For this reason alcohol is classed with the narcotics. The poisonous dose of alcohol can not be estimated.

20. Alcohol produces a sensation of heat on the skin followed by inflammation. It hardens the same by coagulation of its albumin and the abstraction of water.

21. In small amounts alcohol increases the temperature of the body. In larger doses it lowers the same from two to four degrees, Fahrenheit scale, the normal temperature being 98.5°. This is due to an excess of heat dissipation caused by the drug. The waste of alcohol absorbed by the system produces less heat than the waste of the carbo-hydrates (fats), which is not used when there is alcohol in the system to be burnt up. The capillary dilatation and the free sweating produced by the alcohol also helps to lower the temperature of the body.

22. Alcohol diminishes the power to resist cold.

23. Alcohol increases the flow of saliva and aids digestion when taken in small amounts. It produces a feeling of warmth in the stomach, and the alcohol being quickly absorbed the warm feeling passes over the body. A larger quantity causes a congestion of the stomach, gives rise to a pathological secretion, a gastric catarrh, epigastric pain, vomiting, purging, a gastritis, and a degenerative change.

24. Small doses of alcohol increase the heart-beat, and large amounts depress the same, both through a direct cardiac action. The arterial pressure rises and is depressed in the same way. Alcohol in small quantities stimulates the heart, increasing its action in frequency and force, and causing a dilatation of the cutaneous capillaries and those of the brain; witness the flushed face, the glistening eye, and the increased animation.

25. In a poisonous dose of alcohol the heart's action is lessened, but the heart is the last to succumb. After volition and voluntary motion stop, and the voluntary muscles are paralyzed, and respiration ceases, then the heart finally gives way and quits beating.

26. In large doses alcohol enhances coagulation of the blood. In toxic quantities it destroys the ozonizing power of this fluid, causing a separation of the hemoglobin from the corpuscles. In this way it brings on a toxemia.

27. The amount of alcohol absorbed varies and is practically unknown. The drug lessens the excretion of tissue waste both in health and disease. It diminishes the absorption of fats, and increases the

action of the kidneys. In large amounts it produces cirrhotic changes, especially of the liver and the spinal cord.

28. In small doses alcohol has little or no effect on the respiratory functions. In large amounts it produces a depression of both rate and depth of the respiration through a direct action on the centers in the medulla oblongata. The death "from a drunk" is caused by paralysis of the muscles of respiration.

29. Alcohol is a narcotic which spends its powers chiefly on the nervous system. It diminishes or suspends the functions of the cerebrum after a preliminary stage of excitement.

30. In small amounts alcohol excites and in large doses depresses both the peripheral, motor, and sensory nerves.

31. Excessive quantities of alcohol cause a spiral degeneration of the axis-cylinder of the nerve fibers.

32. Reflex action is at first increased and afterward diminished by an influence exercised by the drug upon the spinal cord and the nerves.

33. A small amount of alcohol stimulates the cerebral functions and a large quantity depresses and then abolishes them.

34. Alcohol causes a lack of co-ordination by depressing both the brain and the spinal cord.

35. Toxic doses of alcohol produce hyperemia of both brain and spinal cord, especially of the lumbar enlargement of the latter.

36. The primary effect of alcohol on the brain is stimulation, increasing the functional activity of the brain—ideas flow more freely, senses are more acute, muscular movements are more active; next, the activity changes to excitement—ideas become incoherent and rambling, the muscular movements uncontrolled and inco-ordinate, an over-stimulation of the cells of gray matter.

37. A poisonous dose of alcohol causes the functions of the brain to be suspended, and complete unconsciousness ensues, the reflex movements cease, the functions of organic life are feebly performed, and the centers presiding over the movements of respiration and circulation are finally arrested.

38. The sympathetic system is especially affected by alcohol, as shown by the increased blood pressure in the first stage followed by capillary dilatation, and marked fall of pressure in the latter stages of alcoholic intoxication.

39. The pneumogastric or vagus is the cranial nerve absolutely essential to life, because of its functions in connection with the heart

and lungs, and its relation to the sympathetic system of nerves. Alcohol paralyzes the centers of this nerve and thus produces death by stoppage of the respiration and, last, of the heart-beat.

40. Signs of poisoning from alcohol are (*a*) odor of breath, (*b*) contracted or dilated pupil, (*c*) muscular resolution, (*d*) slow, sighing, irregular, stertorous breathing, (*e*) laxness of the muscular system, (*f*) abolition of reflex movements, (*g*) stupor and coma, (*h*) death.

41. Treatment of poisoning from alcohol consists of, (*a*) evacuation of the contents of the stomach with the stomach pump (nature often does it by vomiting), (*b*) inhalation of ammonia, (*c*) cold to the head, (*d*) warmth to the body, (*e*) faradism of the muscles of respiration.

42. *Post-mortem*, (*a*) hyperemia of gastric mucous membrane, (*b*) distension of right cavities of heart and of the great venous trunks, (*c*) hyperemia of cerebral meninges, (*d*) serous effusion into the ventricles and arachnoid spaces.

43. Alcohol may produce toxemia, which may show itself in insane impulses, acute insanity, delirium tremens, dipsomania, and chronic insanity.

44. Alcohol may and does predispose the habitual user to acute diseases.

45. The habitual user of alcohol can not overcome the effects of acute diseases as readily as the abstainer.

46. Alcohol if habitually and excessively used may cause diseases of the kidneys, liver, stomach, lungs, heart, spleen, pancreas, and of the cerebro-spinal system of nerves. These diseases may consist of inflammations or degenerations.

47. Alcohol increases the ravages of tuberculosis, syphilis, scrofula, rheumatism, and other diathetic diseases, and persons suffering from these diseases can not easily eliminate the toxic substances of alcohol.

48. Alcohol is not necessary to the healthy person, even as a stimulant in fatigue.

49. Alcohol may and does bring on a habit in the system so that the user becomes a slave to the drug, but only in such as are predisposed to it by idiosyncrasy, heredity, or degeneration of the will power of the brain.

50. Alcohol is a useful drug, but should not be used habitually, no more than should opium or any other drug.

[NOTE.—Being asked to serve as an expert on alcohol in a damage suit brought by a widow against a saloon keeper for selling whisky to the husband, which it was alleged caused his death, I formulated the foregoing aphorisms as a guide in testifying.]

JASPER, IND.

ANOREXIA.*

A CLINICAL LECTURE, TRANSLATED BY HERBERT M'CONATHY.

The patient which I wish to present to you is afflicted with nervous anorexia, that is, anorexia not accompanying any organic disease. I call your attention first to the fact that our patient is a woman, for almost all very pronounced cases of nervous anorexia are observed in the female. She is twenty-nine years of age; her hereditary antecedents are most deplorable. Both her father and mother were addicted to the alcohol habit, and, what is worse, forced her from her infancy to drink with them, giving her quite large amounts of brandy, liquors, absinthe, etc. Consequently at the age of twelve she had the usual alcoholic afflictions, such as pituitous vomiting before breakfast, insomnia, nightmare, fornication, and cramps in the lower limbs, which symptoms persisted until her marriage. When removed from the influence of her mother she lost her deplorable habits.

As you see, our patient has abundant reasons to be a sufferer from nervous diseases: reasons of heredity, reasons of intoxication, and moral reasons, from shame at the conduct of her mother, both past and present. It is not astonishing that she should be attacked by this nervous trouble, anorexia.

Six months ago she had spells of vomiting, occurring momentarily and without effort. She threw up little by little all she ate. During the past three months she has not vomited, but has the most profound distaste for all food. She remains whole days without eating, or may take only a few spoonfuls of soup. Sometimes for two or three days she can eat a little meat, then she again ceases to eat. Under such a diet she has become as thin as a skeleton; one wonders how she has so long resisted inanition, but the young withstand it longer than is generally supposed. There have been observations of hysterical subjects who have gone without food for several months. The effects of inanition show themselves very slowly in subjects who, although abstaining entirely from food, are in a state of physical and moral repose. The organism then diminishes its combustion, as is proven by the decrease in the amount of urea; one can live a long time on his capital when he makes only the necessary expenditures. Mr. Flamant and I have sub-

tion; the urea fell to about six grams and the loss of flesh was not very rapid.

I said just now that, for inanition to be well resisted, physical and moral repose were necessary. I now return to these two conditions. Physical repose is necessary, since all work increases combustion. As to moral repose, it is equally necessary, but this fact is less generally known; nevertheless, when we see a woman growing thin who is not sick, we conclude she has some grief, for under this influence the loss of weight is rapid. I have in mind the case of a woman who, on account of grief over the loss of her son, lost twenty pounds in a month. She did not abstain from food at a single meal; it is true she ate but little, still she ate something, yet she lost flesh more rapidly than sufferers from anorexia or others deprived of food entirely for the same length of time. In thus speaking of the emaciation of people who suffer physically or morally we preserve the popular respect for fat people, for obesity seems to indicate physical and moral prosperity.

To withstand inanition well one must be in his youth or in the vigor of life, having neither grief nor uneasiness. These are the conditions which a few years ago permitted several people to attract public attention by voluntarily fasting quite a number of weeks without their health seeming to suffer much. But I insist upon this condition—to resist abstinence from all nourishment (I do not speak of drink) one must be in the vigor of maturity, for it is poorly borne by the old. Hence it is necessary to nourish an old person attacked by an acute disease, for he can not stand a fast which a younger one could stand without inconvenience.

No matter how well inanition may be borne by the young, it must not be continued too long, as is seen by the sad appearance of our patient. She has become like a skeleton, her cheek-bones protrude and her eyes are encircled by dark rings; her face is colorless; you can count her ribs from a distance, and her limbs, to use a popular expression, are like broom-sticks. Any movement produces breathlessness and fatigue. Her moral force has singularly diminished. Her heart is regular, but its movement has increased in frequency one hundred and forty-five beats. The day she entered the hospital her urine amounted to eight hundred grams, containing six grams of urea.

We have said that our patient suffers from anorexia, a word which etymologically means a suppression of the appetite, but there is ordinarily something more, an invincible repugnance for food. People in

general have too great a tendency to think that this repugnance could be conquered by an effort of the will. We frequently observe anorexia in consumptives. These unfortunates know that their cure is partly conditional upon the amount of their nourishment; we see them courageously try every means to awaken their appetite, and so often in vain.

Our patient's disease is purely nervous, but let us not be in haste to say hysterical; it is too easy to apply the word to all troubles which show themselves without an appreciable anatomical lesion. We do not apply here the stigma of hysteria; rather we fear, lest on account of her wretched antecedents and of her habitual sadness she may go on toward melancholia.

But, even while the slight psychic trouble may not increase, the anorexia is a grave condition which may bring on death; and, personally, I have known two women to die under like conditions. One, after arriving at the last degree of emaciation, was obliged to keep her bed, and she died, having presented during the last days of her existence extreme feebleness and cyanosis. Another woman, having eaten nothing for several months, had become as thin as a skeleton, diaphanous; she had not, however, lost her activity; she loved to walk, and complained of nothing. Her family, who live in the country, being justly alarmed, brought her to me. I showed them the danger, and insisted that they leave her in my care for a while. After some hesitation her father declared the thing impossible; he had promised not to leave her more than three days in Paris, and, slave to his word, he took away his daughter, who continued to fast and to be very restless. She died under the following circumstances: One day after walking in the garden she felt fatigued, sat down in a chair, laid back her head and died. She "went out" like a lamp whose oil is exhausted.

But this directly fatal anorexia is rare; death usually comes in some other way. I have seen it come by tuberculosis. You know that in this disease one must consider both the bacillus and the medium in which it is developed. Every day we are exposed to the contagion, and if the majority of subjects escape it is because their medium is not favorable. Now, I know nothing which prepares better for tuberculosis than inanition, and I have seen patients whose appetite was profoundly disturbed become tuberculous. In all books on pathology you will see the fact noticed, that anorexia is a sign of the beginning of tuberculosis. This I do not deny, but I am convinced that lack of appetite is not only a sign of this beginning but a predisposing cause.

Permit me to remind you, and it is a point upon which I insist, that superalimentation is the best treatment for phthisis. In other words, insufficient nourishment is a cause of phthisis, and the best of nourishment is the best treatment for it.

But the treatment which occupies us now is that of our patient. It is necessary to make her eat, no matter by what means, then the appetite will follow. The proverb, "The appetite comes with eating," is for me a medical truth. The great eaters are generally those who have contracted the habit of eating much, and the small eaters those who have contracted the habit of eating little.

As to our patient, I have recourse to artificial alimentation by means of a tube. This is not only to combat the immediate danger, but because experience teaches me that by feeding a sufferer from anorexia the appetite returns, for "the appetite comes with eating."

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, January 24, 1896, Dr. W. L. Rodman, President, in the chair.

Exhibition of Clinical Cases. Dr. W. O. Roberts: This patient came to my office for the first time a few days ago. His father is a robust man; his mother died of what he tells me was consumption. The patient has always been a healthy man. Last July, while out hunting, his gun went off accidentally and he was kicked in the middle of the lower part of the abdomen. It gave him some inconvenience for two or three days. In September last, while plowing, the handle of the plow struck him just above the pubes. This made him very sore, and he passed a little blood. About a week later he noticed an enlargement of the lower part of the abdomen. His temperature yesterday was 102° ; to-day it is 101° . Examination *per rectum* reveals a little fullness anteriorly. Whether or not it is the bladder I am unable to say.

Dr. W. L. Rodman: I show a case something like Dr. Roberts'. I am not very familiar with the history of the case as to dates. While working in the field about five months ago patient was taken with pain in the lower part of the abdomen and suffered with it for some days.

Two or three months later he noticed swelling in the lower part of the abdomen which has been increasing in size. He was aspirated in August and a gallon of clear fluid withdrawn. I would like very much to have the opinion of the members as to the nature of the tumor. There is a tubercular history in the family, but until five months ago the patient was in perfect health. He passes only a small quantity of urine and the tumor is making considerable pressure. He suffers from constipation. He vomits a great deal, and latterly has been vomiting fecal matter daily. He wishes to know if an operation can promise him relief. The diagnosis is uncertain, but it lies between tubercular disease of the mesenteric glands and sarcoma of the right kidney. I prefer doing an exploratory laparotomy.

The other is a post-operative case, a very vigorous man, as you see. While driving through the country, two and a half months ago, over a rough road, his buggy went down about eighteen inches into a hole and he received a severe jolt and was thrown forward and doubled over. He suffered pain in the abdomen for two weeks. Dr. Veech, who was called in to see the case two weeks after the accident, made a diagnosis of appendicitis. I concurred in the diagnosis, and the next morning operated. I felt that it was an unusual case, but that it was appendicitis. I found that instead of being appendicitis there was a piece of gangrenous omentum as large as my fist adherent to the abdominal wall in front. The appendix lay behind this omentum and was healthy. After separating all adhesions, which were numerous and intimately attached to the cecum, the omentum was separated into three or four portions and each ligated. The appendix was adherent to the omentum and was also removed. He bore the operation very well, and his temperature was never above normal during his three weeks' stay at the infirmary. A few days afterward he had fever and returned to the infirmary on account of a stitch abscess. I think that in some way there was a twist of the omentum resulting in interference with the circulation. There was a blood clot as large as a hen's egg in the omentum, which shows the trouble to have been of traumatic origin. I have never seen or known of a similar case. The appendix was certainly not perforated, and its mucous membrane was perfectly normal. I have it from the patient that he has from one half to one degree of fever at times, but it is not constant.

I am in doubt as to the nature of the growth in Dr. Roberts' case, but incline very much to the opinion of Dr. Roberts, that it is a cystic

tumor. The rapid loss of flesh would indicate that it is a sarcomatous tumor, but the symptoms are due to pressure-effects and the emaciation could be accounted for in this way. The patient was here and had the opinion of two very excellent surgeons about six weeks ago. They looked upon the case as inoperable and sent him home. The boy is anxious to have an operation done if it offers any chance at all; and while I said to him to-day that it was a serious case and very problematical as to whether any thing could be done, I told him it was justifiable to make an exploratory laparotomy.

Exhibition of Pathological Specimens. Dr. A. M. Cartledge: I wish to present first some specimens from rectal cases. The first patient was a lady forty years of age. She had been operated upon for a small cancerous growth near the sphincter on the anterior wall of the rectum. A speedy recurrence took place. When I saw her the growth had extended half way around the sphincter, eating in at the anterior portion. About two and a half inches of the rectum were removed by the circular incision, and the sphincter along with it. The shortened rectum was transplanted a little posterior to its normal position. Union was by first intention. Yesterday, for the first time, the woman was conscious that she would have an action. The prognosis was given that there would be incontinence, but I do not believe she will have it.

Ten days after this, and occurring in the practice of the same physician, I had a second case. Examination revealed growth on the posterior wall five inches above sphincter. A modified Kraske operation was done. I resected the coccyx up to the sacrum, which gave abundant room to clear the rectum and free it as high as the peritoneum. I concluded to take out a wide wedge on the posterior part of the rectum and transplant it backward. An anterior strip was dissected up and brought back and kept as a regenerative matrix.

There is entire union of the anterior surface; behind there is some suppuration. The anus is in near its normal situation, and if incontinence follows he will be free from the inconvenience of a colotomy.

The next case is interesting as showing an extensive mammary tumor. The woman was operated upon about fourteen days ago, and it was an unpromising case. The growth was discovered about a year ago, and operation advised but refused. The pectoralis major was

midable wound, closure of which was, of course, out of the question. It was brought as near together as possible and the cavity packed with gauze. The wound has never suppurated a particle and has not had a drop of water on it. The highest temperature was 100°. The patient was out of bed on the fifth day, and has been up ever since.

A woman presented to me about ten days ago and said that she was twenty-nine years of age and the mother of three children. In November last she missed her sickness. In December she had a little bloody discharge from the vagina, but no pain. Her physician, who examined her at that time, made a diagnosis of cancer of the uterus. The growth of the neoplasm during December was remarkably rapid. Pregnancy was considered in the matter. The uterus, in the third month of pregnancy, was removed by vaginal hysterectomy.

Dr. Roberts: This morning a man presented himself. He is forty-five years of age and a healthy looking man. He said that his father and mother both died of lung trouble, both however living to be over sixty years old. He is one of fifteen children, all excepting four of whom died in infancy. He has three sisters past middle life and perfectly healthy. Last September in lifting something he was seized with severe pain in the left testicle, and in a short while the testicle began to swell. He has been under the care of several doctors. The testicle has never attained a great size. He has been treated by strapping, cold applications, suspensory bandage, etc. He has never had syphilis. There was very little fluid in the tunica vaginalis; the epididymis was hard; the testicle itself felt normal. I told him I believed it to be a tubercular testicle and advised its removal, to which he consented, and I now show the specimen.

Dr. W. C. Dugan: The rectal cases are of especial interest to me. I am glad to know that Dr. Cartledge operated as he did, drawing down the rectum. I am of the opinion that we can draw down very much more of the rectum than is usually taught. We can often pull down six or seven inches. I am not at all surprised that there is no incontinence here. We all know that the external sphincter has to do with feces only during diarrhea. We can cut both sphincters and the patients will do well unless they have diarrhea. What is called the third sphincter seems to control the bowels ordinarily.

The second specimen is a peculiar one. It looks to me like a tubercular ulcer. It would seem to me that a carcinoma thus located would be much more diffuse and thicker before ulceration manifests itself, but

let it be cancer or tubercular, the treatment was correct, as it disposed in a thorough way of a disease that would have caused death. It may be early ulceration of a cancer, but I am disposed to regard it tubercular.

The uterus is very interesting. I think it is a sarcoma, and I should have removed it as he did. The question of saving the child should not have been considered for the reason that the patient would hardly have lived for it to reach maturity. These cases run a very rapid course.

Dr. Roberts' case is of interest because of the liability in tubercular testicle to the involvement of other parts. We should make an examination of the prostate in all such cases, and if the trouble is primarily in the epididymis and the prostate free from any deposit, we may say to the patient that the other will not likely become involved. I do not think because he has involvement of one testicle there is increased liability to involvement of the other, unless the prostate is involved as the primary lesion, or that he has gonorrheal epididymitis which predisposes to any disease of the chronic variety.

Dr. Roberts: The man gave no symptoms of prostatic disease, and no enlargement was detected.

Dr. Turner Anderson: I was delighted with the beautiful array of pathological specimens. The one that was of special interest to me was the cancer of the uterus complicated by pregnancy. Fortunately cancer of the uterus ordinarily produces sterility. I think I have seen only one case where pregnancy occurred with a malignant tumor advanced to the stage of this. It is fortunate that Dr. Cartledge's case was taken at the time it was, and I congratulate him upon the fact that he was able to operate so early. In labors complicated by these neoplasms more than thirty-three per cent of the women die of sepsis. In connection with the case which came under my notice I took occasion to look up the literature of the subject. Hysterectomy should have been undertaken in this case even if the diagnosis of pregnancy had been made.

Dr. Rodman: I would like to ask as to the relative frequency of sarcoma and carcinoma in the uterus.

Dr. Thomas S. Bullock: The case presented by Dr. Cartledge is the second one of the kind I have seen, and the first I have ever seen successfully removed. I congratulate him on the outcome of the case.

Dr. A. M. Vance: I had the pleasure of seeing Dr. Cartledge operate by the modified Kraske operation.

The essay of the evening was read by Dr. A. M. Cartledge; subject, Diffuse Septic Peritonitis. [See page 201.]

Dr. Anderson: The experience of Dr. Cartledge has doubtless been the experience of the largest number of the physicians of our Society. He has covered the ground very thoroughly, and I do not know that there is much left for me to say in connection with the subject. There are cases of puerperal sepsis in which we have evidence of diffuse septic peritonitis which perhaps might be operated upon. There is a small percentage of these cases which Prof. Hirst claims ought to be operated upon. Those of you who have read the article in the American Journal of Obstetrics have been struck by the difficulty of determining when operation should be done in these cases. He states that unless there is evidence that the peritonitis is local, operation is hopeless. I do not care to say any thing more upon the subject, except that those cases of puerperal sepsis wherein there is a focus of pus and operation is done for clearing out this pus are the only ones in which relief is to be obtained. The lesson to be drawn from the paper of Dr. Cartledge, and a study of puerperal sepsis, is prophylaxis; most cases of septic peritonitis of puerperal origin are from external infection.

Dr. F. C. Wilson: Two lessons are impressed upon us in connection with the paper: first, the importance of prophylaxis in puerperal sepsis, alluded to by Dr. Anderson; and second, the importance of early diagnosis, more especially in appendicular cases. The earlier the diagnosis can be made and operation determined upon the better being the prospect of success. In cases that have come under my observation a sudden rise of temperature with quickening of the pulse has indicated a pending perforation, and I believe that if we watch these cases closely this might be the means of determining the time for operation and save lives. In recurrent cases of appendicitis I have been in the habit of stating to patients that sooner or later it will be impossible to relieve by ordinary treatment, and that an operation may have been postponed until too late, and that even if the symptoms do subside, as soon as they recur an operation should be done without delay. In several cases in my experience I have not been called back for fear of the advice I would have given; others have been called, and the cases watched until the fatal point had been reached, and operation of no avail.

Dr. Dugan: This is a very interesting subject, and I am exceedingly glad to hear such a paper read, the necessity of which has impressed

every one. I think we should report our fatal cases in medical societies as well as our successful ones. It does not sound so well and does not read so well, but it is better. I am glad that Dr. Wilson has mentioned recurrent appendicitis. Dr. Cartledge has impressed upon us the hopelessness of operating upon cases where there is biliary vomiting and distension and other evidences of general peritonitis; but I am not prepared to accept the statement that all cases of general suppurative peritonitis die whether operated upon or not. I operated upon an old man at the Norton Infirmary for a supposed appendicitis. He was in collapse at the time of operation. A large quantity of bile, pus, and numbers of small gall-stones were removed from the general peritoneal cavity. He made an uninterrupted recovery.

I saw another case with Dr. Holt, of Anchorage, in a young negro man with general suppurative peritonitis. His appendix ruptured at three o'clock one day, and it was noon the following day before he was operated on. There was marked distension, and as soon as the cavity was opened a large amount of that thin, dirty, offensive pus was evacuated. The intestines were floating in it, and the peritoneal cavity of the bowels looked like that of a cancer. He was washed out and drainage provided for by the free use of gauze, and he was closed up with no hope of recovery. But he got well without an unpleasant symptom.

Another point he brought out, not so forcibly as I should like, is that these cases do not complain of pain as much on the second or third day as on the first, and physicians are on this account loth to believe there is general peritonitis, or that their patient is not better. Abby has often mentioned this and urged that delay was dangerous. And, again, there are cases (and these, too, the most violent) in which there is very little pain. The intensity of the inflammation or else the ptomaines so blunt the sensibility that they can not feel it. The hopeless cases, in my experience, are those with persistent vomiting of a dark fluid, or even a watery fluid, and when I find before or after operation this dark vomit, with a rapid pulse and depressed expression, I consider it hopeless.

Dr. H. H. Grant: We are all agreed about the preventive treatment of such cases as threaten infection of the peritoneal cavity, and that the best possible means of preventing general peritonitis is to operate upon them before that condition arises. The question that Dr. Cartledge has brought out is, whether we should operate or not in general peritonitis. I would answer generally, no, but would qualify it by saying that while

a good general surgeon would be able usually to say whether the time for operation had passed, the general practitioner is not always sure of this. The difficulty of determining that general peritonitis existed would deter me from too positive refusal to operate. I would be afraid to indorse a position which would constitute dangerous data for incompetent diagnosticians. Besides, there is still some good testimony that cases of general peritonitis have been rescued from death by operation, showing either there was error in diagnosis or the conclusion is untrue. For these reasons I think it unsafe for the general opinion to go out that no operation is advisable where there is general septic peritonitis. Practically it has been settled that all cases of general septic peritonitis die without surgery. We have high testimony that cases have recovered after operation also. If the view is accepted that operation is useless, aid may be denied the general practitioner to cases that might be rescued, either through error in diagnosis or reasoning from false premises in argument.

Dr. Vance: The question with the surgeon is, when to operate and when not to operate in cases of diffuse septic peritonitis. It seems from recent reports that it is within the range of possibility to save a life occasionally by operation, but I do not think I have ever had a case recover when the general peritoneal cavity was involved. The essential point in the treatment of traumatic cases is to get them to the operating-table as soon as possible, with the hope of saving a few in a number. I admire Dr. Cartledge very much for reporting his deaths. My experience has been just the same as his. I have operated with the hope of saving one occasionally, but have never yet done so.

Dr. John G. Cecil: I have only one point to make. It seems to me there is a condition in many of these cases which would determine in a measure the advisability of operating. I believe it is considered by most surgeons that to operate in profound shock is seldom advisable, unless the cause of the shock can be removed by the operation. Most of these cases are in profound shock. The rapid pulse and falling temperature should be a good point to the surgeon. In any case of septic peritonitis if there is a rapidly increasing pulse, and in spite of stimulation and other medication a falling or low temperature, all operative procedures should be prohibited. I was very much struck recently with a case of perforation of the gut in typhoid fever, in which a man in the third week suddenly had a decided drop in temperature, the pulse rapidly increasing. Vomiting, purging, and swelling set in and

death resulted in twelve hours, the temperature all the time being sub-normal. I have enjoyed the paper very much and think it is one which will teach us a great deal.

Dr. Cartledge (closing the discussion): I am very much obliged for the liberal discussion. The point made by Dr. Cecil is a very valuable one. The coldness and shock denote that pus has been emptied into the peritoneal cavity, and if we can get the cases at the very inception of the shock some of them may be saved. The point which decides whether or not an operation shall be done is not the presence or absence of shock, but the length of time that has elapsed since perforation. If you can operate within twelve hours, careful observations have shown that endothelial abrasion and absorption has not been sufficient to cause death and some cases will recover. After this length of time it is better not to operate. Early operation is a preventive. I think Dr. Dugan has fallen into the same error as Dr. Douglas, whose paper was read before the Southern Surgical and Gynecological Society at New Orleans. He, Dr. Dugan, operated at once, washed out the peritoneal cavity and prevented general septic peritonitis; he did not cure it by this operation. It is unusual for the appendix to have ruptured into the peritoneal cavity twelve hours before operation and the patient recover. Possibly it is to be accounted for by the fact that the vital powers of the patient were so good.

JOHN L. HOWARD, *Secretary.*

UREA AS A DIURETIC.—Governed by a knowledge of the solvent action of urea upon uric acid, Klemperer (*Berlinklinische Wochenschrift*) was led to employ the first-named agent, medicinally, in the treatment of a number of cases of uric-acid renal calculi. The results were entirely satisfactory. It was noticed besides that conspicuous diuresis resulted also. For this reason it was concluded to employ urea as a diuretic, and in two cases of cirrhosis of the liver attended with ascites it was thus used and caused the disappearance of the peritoneal effusion. The agent was given dissolved in distilled water in the proportions of from 1 to 20:200 (from gr. xv to 3 v to about f 3 vij) to be taken daily in tablespoonful doses at intervals of an hour. The taste of the drug is not agreeable, but is readily removed by drinking milk after the ingestion. No ulterior influence was exerted upon the appetite or digestion of those using the agent. For its action as a diuretic, a healthy state of the renal parenchyma is necessary.—*Medical News.*

Reviews and Bibliography.

Annual Medical Sciences. A yearly report of the Progress of the General Sanitary Sciences throughout the World. Edited by CHARLES E. SAJOUS, M. D., and seventy associate editors, assisted by over two hundred corresponding editors, collaborators, and correspondents. Illustrated with chromo-lithographs, engravings, and maps. In five volumes. The F. A. Davis Company, publishers, Philadelphia, New York, Chicago. London, F. J. Rebman. Australian agency, Melbourne, Victoria.

To say that the title given to this work is fully merited by its character really embraces all that may need to be said, only it takes some time and contemplation to enable one to realize what is implied in the title. We gave last year an estimate of the number of pages probably culled for the material in these volumes, amounting, as we recall, to something over a half a million. One man, to read it all, would have to read about three thousand pages a day, at a probable cost of about twenty dollars for every working day in the year. One can easily believe that not a single thing that is new in medicine worthy of being noticed has been passed over by the authors of these volumes. Of course they can not entirely supplant journals with the inquiring physician, for these have a local interest and a fullness that no year book can have. Only from such a work as this, however, can he learn what is going on in the great world of medicine. D. T. S.

An American Text-Book of Surgery, for Practitioners and Students. Edited by WILLIAM W. KEEN, M. D., LL. D., and J. WILLIAM WHITE, M. D., Ph. D. Second edition, carefully revised. Philadelphia: W. B. Saunders & Co. 1895.

It is with genuine pleasure that we welcome the second edition of this valuable work so soon after the appearance of the first. The distinguished editors and collaborators should feel greatly elated over the fact that the reception of the work by the profession and the rapid disposal of the first edition has been so flattering. This fact is almost unprecedented. There is to be found in the new considerable improvement over the old, not only in the subject-matter but in the illustrations. Much is new in the former, and many of the latter are new. Among the new procedures described are the osteoplastic resections of the skull, the Bassini operation for radical cure of hernia, Murphy's button in intestinal anastomosis, Schede's modification of Elander's operation, McBurney's method of making abdominal wound in non-suppurating cases of appendicitis, Hartly-Krouse operation for removing the gasserian ganglion, a section on surgery of the liver, and much more. In fact, modern surgery up to date, finely illustrated, can be found in all its places in this most thorough and compact work. No man wishing to keep abreast of the times can afford to be without it. APM. V.

Surgery : A Practical Treatise with Special Reference to Treatment. By C. W. MANSELL MULLIN, M. A., M. D., Oxon., Fellow of the Royal College of Surgeons, etc., assisted by various writers on Special Subjects, with six hundred and twenty-three illustrations. Third American edition. Revised and edited by JOHN B. HAMILTON, M. D., LL. D., Professor of the Principles of Surgery and Clinical Surgery, Rush Medical College, Chicago, etc. 1250 pp. Price, \$6 and \$7. Philadelphia: P. Blakiston, Son & Co. 1895.

It would not be possible to do justice to the subject of general surgery in less than is given to it in this volume. In its clear expression and its excellent illustrations it has been enabled to take a scope almost as wide as the encyclopedias, and yet with a satisfactory treatment of almost every subject. As a text-book for students it is nowhere equaled. Not the least interesting fact connected with the work is the statement that it took just six weeks to put it through the press. D. T. S.

The Principles and Practice of Medicine. Designed for the Use of Practitioners and Students of Medicine. By WILLIAM OSLER, M. D., Fellow of the Royal College of Physicians, London; Professor of Medicine in the Johns Hopkins University, etc. Second edition. 1143 pp. New York: D. Appleton & Co. 1895.

Though it is said that comparisons are odious, it is hardly too much to say that no other man in the general practice of medicine to-day in America stands so high as Dr. William Osler. He was already so well known to the profession that when the first edition of his practice appeared it came with the familiar visage of an old acquaintance. At once it took rank with Loomis, Roberts, Eichhorst, and Strümpell.

This edition has been still further improved, all recent progress being incorporated. Little more is needed to say of a book than that it is on the lecture card of nearly every school in America, and that it is already held in the highest esteem wherever the English tongue is spoken. D. T. S.

System of Surgery. Edited by FREDERIC S. DENNIS, M. D., Professor of the Principles and Practice of Surgery, Bellevue Hospital Medical College, etc, assisted by JOHN S. BILLINGS, M. D., LL. D., Edin. and Harv.; D. C. L., Oxon.; Deputy Surgeon-General U. S. A. Vol. III: Surgery of the Larynx, Tongue, Jaws, Teeth, Salivary Glands, Neck, and Chest; Diseases and Surgery of the Eye and Ear; Surgical Diseases of the Skin; Surgery of the Genito-Urinary System; Syphilis. Profusely illustrated. 919 pp. Philadelphia: Lea Brothers & Co. 1895.

The contributors to this third volume are Drs. Gorham Bacon, D. Bryson Delavan, Frederic S. Dennis, George E. de Schneinitz, William A. Hardaway, H. H. Mudd, Henry D. Noyes, Willard Parker, Charles B. Porter, Robert W. Taylor, Lewis McLane Tiffany, and J. William White.

The same effort has been made to exhaust resources in book-making and in authorship to place this work in the very front rank of surgical works.

D. T. S.

Abstracts and Selections.

THE SIGNIFICANCE OF GONORRHEA IN PREGNANCY, DELIVERY, AND THE PUERPERIUM.—H. Fehling (before the Society of Physicians of Halle, *Münch. med. Woch.*) emphasized the great importance of an old gonorrhea in the male as a frequent cause of sterility, as shown by the teaching of Noeggerath on the recent investigations of Wertheim. Ten to fifteen per cent of all matrimonies are sterile; of these, over fifty per cent are due to gonorrhea in the husband. And even Glinder's estimate of 71.3 per cent of sterility due to gonorrhea is too low. Aspermia or azoösporia without gonorrheal basis is exceedingly rare. We generally obtain a history of gonorrheal epididymitis, and even when all catarrhal symptoms have subsided we fail to find spermatozoa in the semen. These cases are practically hopeless, unless some genius shall arise who, by surgical measures, can render the vas deferens permeable. Greater attention should be paid to the prophylaxis of epididymitis in the treatment of urethral gonorrhea.

Sterility in the Female due to Gonorrheal Infection.—In rare cases with a comparatively recent gonorrhea of the male it is possible for conception to occur quite early after marriage, before infection takes place. In still rarer cases, especially in the unmarried, gonorrheal infection may not occur until the second or third month of gestation. According to Wertheim, a man may possess a hidden gonorrhea, there being but a few virulent gonococci in his urethra; during matrimonial intercourse these cocci reach the genital mucous membrane of the wife and find there, favored by the multiplied relations of the honeymoon, a most propitious field for propagation with increased virulency; these in turn reinfect the husband with an acute blennorrhea; thus the happy (?) pair are mutually infected. The more recent the gonorrhea of the husband the greater the danger is of infection for the wife. Exceptions, however, occur; pregnancy may result with a recent gonorrhea in the husband.

The Influence of Gonorrhea on Pregnancy, whether occurring simultaneously with Conception or later on in Gestation. Urethritis is seldom the only localization of gonorrhea. It is more frequent in non-pregnant women. When it does occur in pregnancy it is very benign, often subsiding spontaneously. Vulvitis is more frequent, and in uncleanly persons may be severe. Acute Bartholinitis is rare during pregnancy. Condylomata acuminata is relatively rare, usually found on the vulva, less often in the vagina. Vaginitis is more common than admitted by some. Vaginitis punctata, resembling the climacteric form, is met with most frequently. Not every vaginitis met with during pregnancy should be considered gonorrheal. In gonorrheal vaginitis of pregnancy the thin, purulent secretion is abundant, and excoriates both the vulva and adjoining skin.

Erosions of the cervix may occur with hypertrophy of the glands and connective tissue. Gonorrheal catarrh of the cervix is not rare, but, as in the majority of cases the infection occurs after conception, the infection of the cervical canal must come from below. According to Walthard, gonococci, like other bacteria from without, are rendered innocuous by leucocytes in the middle and lower portion of the cervical canal. The upper region remains free from germs if these are not carelessly carried there by the fingers or instruments. Wertheim's recent investigations of gonorrheal endometritis by the examination of recently extirpated uteri with gonorrheal inflammation of the appendages showed gonococci in the uterine secretions; this is principally a question of interstitial endometritis complicated by the glandular form. Such an endometritis may account for abortion with gonorrheal ophthalmia of infants. Metritis of the same nature may complicate the endometritis; if so, it is doubtful that pregnancy can proceed to term. It is still less likely that conception could take place with gonorrheal metritis. Gonorrheal perimetritis is proved; infection occurring with conception, or soon after, in the oviducts, the consequent catarrh may reach the peritoneum later on in pregnancy by the upward crowding of the uterus and cause a peri-oöphoritis with localized adhesions.

Treatment. Urethritis seldom demands special treatment; the free drinking of alkaline waters is generally all that is required. In obstinate cases iodoform pencils may be introduced into the urethra. Vaginitis should not be treated too heroically; douchings will not reach all the recesses of the vaginal convolutions and may induce abortion. Krönig and Menze think it unwise to lower the normal germicidal power of the mucous membrane by antiseptic douches. Douching with normal solutions of chloride of sodium, and painting the vaginal membrane by means of a Ferguson's cylindrical speculum, with a five- to ten-per-cent solution of nitrate of silver, or dusting it with iodoform, is sufficient. For vulvitis compresses of lead-water may be used. Condylomata should not be removed until after delivery, as they are liable to return. Excision and the actual cautery are the best measures. During labor, gonorrheal secretions should be cleansed away, and antiseptic douches employed. The newborn infant's eyes should be immediately cleansed and a few drops of a two-per-cent solution of nitrate of silver instilled. Gonorrheal stomatitis is very rare but may occur in face presentations, and should be treated by weak solutions of nitrate of silver and boric acid.

Much doubt exists as to gonorrheal endometritis of the puerperium independent of septic infection as claimed to occur by Krönig. Puerperal gonorrheal salpingitis, denied by Fritsch, does occur, according to Fehling, who saw four cases. Virulent gonococci existed in the oviducts at the time of delivery and were forced into the peritoneal cavity by uterine contractions. As the ampulla is fixed at the linear innominata at delivery, the localized peritonitis occurs at that point. The symptoms are those of pelvic peritonitis. There is a tendency to localization and encapsulation,

with frequent relapses and chronic pelvic peritonitis. Sanger, Wertheim, and Zweifel have shown that ovarian abscess during the puerperium may be of gonorrheal origin. Sarfert has found diplococci in pus from mastitis, but the presence of gonococci have not been established by the culture method.—*T.W. Cleaveland, in the Amer. Gynecological and Obstetrical Jour.*

OXYCYANIDE OF MERCURY IN THE TREATMENT OF OPHTHALMIA NEONATORUM.—Von Sicherer (*Münch. med. Wochen.*) recommends the use of oxycyanide of mercury in the treatment of ophthalmia neonatorum. The advantages of this drug were first brought to the attention of ophthalmologists by Schlosser in 1893, at the meeting of the Ophthalmological Society in Heidelberg. Schlosser demonstrated that this preparation presented antiseptic properties equal to those of the bichloride of mercury but caused much less local irritation and much less power of coagulating the albumin than the corrosive sublimate.

Generally in acute affections of the conjunctiva one- or two-per-cent solutions are used. In ophthalmia neonatorum a solution of one to five hundred has proved most effectual, and has been used exclusively in this affection in the University clinic for several years past. The application is extremely simple: After eversion of the lids they are rinsed thoroughly with this solution, and in such a manner that every fold of the conjunctiva is freed from the secretions. This should be done daily. Instruction should be given for the constant use of ice compresses. The nurse should be cautioned against removing the secretion, for, unless the greatest care is exercised, injury is done to the superficial layers of the cornea with subsequent ulceration. If the cornea is not already affected when this treatment is begun, a favorable termination can be absolutely guaranteed, which is by no means the case with other methods of treatment. Even when slight infiltrations of the cornea exist, by this means they can usually be made to subside, and it is only in extensive ulcerations and in prolapsus of the iris that this and other means of treatment are of no avail.

If the results of the ordinary method of treating this affection—namely, brushing with a two-per-cent solution of nitrate of silver and neutralizing with a solution of sodium chloride—be compared with those obtained by simply rinsing with the oxycyanide, the preference would be unhesitatingly given to the latter method.

An efficient remedy for combating a disease which causes forty-one per cent of the cases of total blindness should be welcomed by all.—*Ibid.*

GONORRHEAL METRITIS.—Max Madlener (*Cent. für Gyn.*) states that great progress has been made in our knowledge of gonorrhea in the female during the past two years. When the gonococcus was first demonstrated it was considered merely as a mucous parasite, but now it has been proved that the bearer of gonorrheal infection is also able to penetrate into the deeper layers of tissue. Wertheim says: "All the inflammatory products in the tubes and ovaries, in the peritoneum and in the broad ligament, occurring as a sequel to gonorrhea, are caused by the gonococcus."

The gonococcus has been demonstrated in the endometrium of the corpus and cervix but not in the muscular tissue. The symptoms of metritis, such as sensitiveness to pressure and general enlargement, are often found as a sequel to gonorrhea. Whether this is caused by the gonococcus has not yet been determined. The author examined many sections taken from a uterus that was removed *per vaginam*. The patient claimed to have been infected three months previous to the operation. Gonococci were found in the cervical secretion. The uterus was enlarged and was very sensitive to pressure. The uterine appendages were much enlarged and very sensitive to pressure. These proved to be pus tubes. No gonococci were found in the muscular tissue. In the second specimen the author was more successful and believes that he has demonstrated the presence of gonococci among the muscular fibers. The specimens were taken from a uterus that had been removed seven weeks after confinement. Three weeks before delivery a profuse purulent discharge appeared. The labor and puerperium appeared to be normal. She arose on the seventh day and complained of being very weak but had no fever. Five weeks later she was attacked with violent pains in the abdomen. These became so intense that the patient sought her bed and had to be carried to the hospital. Vaginal hysterectomy was performed. The uterus was large and infiltrated with pus; pyosalpinx was found on one side and a purulent salpingitis on the other. After taking many sections from the uterus the following results were obtained: Forms clearly showing diplococci and corresponding in size to the gonococci were found in sections taken longitudinally from the fundus. The cocci were found in pairs, usually between the cells of inflammatory exudate and sometimes between the muscle cells. The cocci were found in sections taken from the anterior and posterior walls of the body and from the cervix. The author thinks that the failure to find the gonococci in the other cases was due to the length of time that expired after inspection before the examination was made. The gonococci remain for years in the mucous membrane and can be demonstrated there, but the uterine muscular tissue is not a favorable soil for a prolonged stay or for propagation. They either perish there or pass through the uterine wall to the peritoneum. The author believes that many uterine abscesses are caused by the gonococci. Many of these abscesses followed abortion, and many did not show symptoms of infection by staphylococci or streptococci, but occurred during the latter part of the puerperium—indeed, post-puerperal infection has many characteristics of gonorrhea.

In conclusion, Neisser's gonococcus is capable of penetrating the muscular tissue from the endometrium and there causing inflammation. This inflammation may proceed to the formation of abscesses. This occurs most frequently in puerperal cases. The gonococcus soon disappears from the muscular tissue either by destruction or by emigration. By invasion of the serous membrane from the endometrium the peritoneum may be infected without any tubal disease. In this way perimetritis in gonorrhea may be explained.—*Ibid.*

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ."

Vol. 21.

SATURDAY, MARCH 21, 1896.

No. 6.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

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CASTRATION FOR ENLARGED PROSTATE.

It is a remarkable fact that man is the only animal who is punished with enlarged prostate; not that other animals have no prostate gland, but that in them the urethra only gutters the gland, while man's urethra tunnels it. Prostatic hypertrophy, if it exist in veterinary surgery, would therefore be a trifling affection as compared with the disease of the same name in man.

But there are other than anatomical reasons for man's torment in this particular, and the chief one is the great age he attains, and consequently the great length of the procreative period in man as compared with that of other animals. This constant use of the organs of generation for many years, with the vascular congestions, muscular high tensions, and nerve overtaxations which it involves whenever venery is excessive, makes it not remarkable that the prostate should become inconveniently large at fifty and upward, but marvelous that the hypertrophy does not occur at a much earlier period in life.

Enlarged prostate would seem to be, then, nature's embargo upon the further exercise of a function which, in the case of most men, has been too liberally indulged over a period far longer than physiology can allow without pathological protest. And so "the old man's bladder" is an opprobrium which surgery has been trying to lift, but, alas! vainly, ever since the anatomy of the urethra has come to be understood.

We are well aware that the above theory of the etiology of prostatic hypertrophy is not the one put forward by the surgical authorities of the day; but if the bold operation (namely, castration,) recently suggested and now practiced for its relief be well founded, as all operations should be, in anatomy and physiology, long-continued indulgence in venery must be accepted as the cause.

Indeed, analogical reasoning, *e. g.*, ovarian congestion in pelvic neuralgias and other pelvic derangements, and prolonged abuse with chronic derangement of the digestive organs in relation to Bright's disease, etc., suggests its fitness.

Be the theory of cause what it may, the new operation is brilliant of results, and promises to add many years of comfort to a most dignified and respectable, but grievously tormented class of invalids.

Urethras impervious to urine or instruments before the operation have admitted a soft catheter in a few hours, and have permitted of voluntary micturition in a week's time, while coincidental rectal hemorrhoids have, after a few months, entirely disappeared.

Such results are indeed brilliant, and the operation, notwithstanding its great physiological expense, will doubtless be hailed with joy and submitted to with gladness by a multitude of senile sufferers.

PRESIDENT LEWIS AND THE STATE SOCIETY.

In our last issue we called the attention of the Fellows to the approaching meeting of the State Society through a letter from our permanent secretary, Dr. Steele Bailey. In this we publish an address from the president-elect, Dr. John A. Lewis, to the medical profession of the State at large. The president calls attention to the large number of regular physicians registered in the State of Kentucky, and duly deprecates the fact that not one in six of these are members of our State Society.

There would seem to be at least three reasons for this: (1) Five out of every six doctors in Kentucky are either too busy to attend the meetings of the society, (2) or they are apathetic as to their own growth in medicine and the medical well-being of the State, (3) or they are not aware of the important work done by medical societies and the personal benefits accruing to every individual member of such organizations.

But with the president's forceful, timely, and earnest appeal before us, we need not elaborate these points.

Dr. John A. Lewis needs no introduction to our readers. His name is familiar to all who keep pace with medical development in the State. No man better understands the status of Kentucky medicine, nor has the State Society ever had a more earnest, zealous, and unselfish worker for its highest good.

His efforts to awaken interest in the State Society among those who have heretofore treated it as though it were not, speak well for his head and heart, and will certainly be warmly seconded by every friend of medical advancement and that vital factor in the same—the Medical Society.

Notes and Queries.

THE KENTUCKY STATE MEDICAL SOCIETY.

To the Medical Profession of Kentucky:

GENTLEMEN: In issuing this address to the medical profession of Kentucky, I beg that you will believe me when I assure you that I am actuated solely by a desire to advance the true interests of our profession throughout the entire Commonwealth.

There are to-day registered under the Medical Practice Act, in the State, nearly three thousand regular physicians. Of this number but four hundred and fifty names appear upon the rolls of the Kentucky State Medical Society. This fact alone speaks in no uncertain voice as to the apathy of the medical profession upon the subject of the State Medical Society. We ask our medical brethren, in all candor, if this is as it should be? Can it be other than a matter of deepest regret to all interested in medical progress that the name of every reputable physician in our State does not appear on the roll of the Kentucky State Medical Society?

The Kentucky State Medical Society was organized nearly a half century ago by our honored predecessors, not for the benefit of the few, but for the benefit of every member of the profession within the bounds of the Commonwealth.

The ends in view, as stated by them, are the advancement of medical science, the diffusion of medical and scientific knowledge, the elevation of professional character, the cultivation of amity, and the and the maintenance of harmony among its members, and the promotion of the interests, honor, and efficiency of the medical profession throughout the State of Kentucky. Are not these aims and ends broad enough and exalted enough

to enlist the sympathy of all? Can any question that the surest way to reach these ends is through organized effort?

Medical societies to-day, as they always have been, are the centers of inspiration for progress.

If any doubt the value of the work being done by the Kentucky State Medical Society, I refer you to the volumes of published Transactions as they appear from year to year. Medicine is recognized everywhere as the most progressive of all the sciences. Organized effort is the order of the day in all our sister Commonwealths. Progress is the watchword; "to stand still is to go backward." Kentuckians have never been laggards upon any arena. We certainly can not afford to be found anywhere but in the front rank of medicine.

The memories of McDowell and Dudley and Gross and Yandell and Cowling and Jackson and a thousand others forbid!

To-day we have as capable a rank and file of physicians as exists anywhere on the earth. They lack only organization and drill. In behalf of medical progress I earnestly appeal to the physicians all over the State to organize county and district medical societies, and that these organizations send delegates to the annual meetings of the Kentucky State Medical Society; and I beg every reputable physician in the State, not only to become a member of the Kentucky State Medical Society himself, but also to see that his neighbor becomes a member. There is strength and inspiration in numbers.

What an invincible phalanx would be presented if two thousand disciplined physicians marched under the banner of the Kentucky State Medical Society!

For the sum of three dollars, paid annually, you can become a member of the Society, enjoying all its honors and privileges, besides receiving the year's volume of published Transactions. If you can not attend the Society in person, you may still become a member by sending your petition for membership, accompanied by three dollars, to Dr. Steele Bailey, Secretary of the Society, at Stanford, Ky. Your petition should be indorsed by your county society, or by two reputable physicians. Petitions for membership may be sent in at any time, and will be promptly acted on at the meeting of the Society in June. But I would suggest that it would greatly facilitate the work of the secretary if petitions were sent in early.

In conclusion, allow me to press this matter earnestly upon your consideration, and to say that I shall be deeply disappointed if this appeal to my medical brethren does not yield a rich harvest at our next annual convention at Lebanon, Kentucky.

Fraternally,

JOHN A. LEWIS,

Pres. Ky. State Med. Society.

GEORGETOWN, KY., March 19, 1896.

AN OVERDOSE OF STRYCHNINE.—A member of the profession has sent us an account of his unpleasant personal experiences after an overdose of strychnine. He had for some days been taking once a day after dinner

three to five drops of liquor strychninæ, B. P., but on a certain evening he carefully "poured out ten drops," which he mixed with two drams of a solution of sulphate of quinine of the strength of one grain to the dram. This was well diluted with water, and two drops of liquor arsenici hydrochloricus were added. Half an hour after taking this draught he began to feel uneasy and restless, and found he could not walk around with comfort. A little later he lost control of his legs, which felt tense and jerky. He then noticed some slight stiffness in the facial muscles and found there was a distinct tendency for the corners of the mouth to be drawn up. He felt better when lying down, but any attempt to move excited spasm of the muscles of the legs and thighs. He took twenty grains of bromide of potassium, and about an hour after the first appearance of the symptoms he sent for medical aid, but meanwhile slight convulsions with distinct opisthotonos had set in. Although the mind is usually said to be absolutely clear, the patient found concentration of thought difficult, and he remarks that, although doubtless under ordinary circumstances he would have remembered chloral as the proper physiological antidote, its very existence never entered his head. Nearly an hour passed before medical assistance arrived, and by this time the patient was conscious of being in extreme danger; the slightest movement was accompanied by a convulsion of the whole body, with well-marked opisthotonos and with sudden contraction of the muscles of the chest. Breathing was now difficult, but the diaphragm appeared to be working well and fully under control. A quarter of a grain of morphine was injected subcutaneously, and, as the convulsions continued, twenty minutes later another injection of one eighth of a grain of morphine was given. From this time the spasms gradually declined, he vomited freely, and then slept at intervals from midnight until about 7:30 A. M., when the symptoms were practically at an end, though for many days he felt tired and disinclined for work, and the muscles of his chest remained acutely painful on any exertion. This case presents many interesting features; assuming that ten minims of liquor strychninæ was the dose taken, the symptoms were very severe, but the patient admits that possibly, while talking, he might have poured out two teaspoonfuls of the strychnine instead of the quinine solution. The early affection of the facial muscles is also unusual, and the patient doubts very much whether any of the muscles were quite relaxed in the intervals between the paroxysms; the legs were constantly jerking, and it seemed impossible to bend them, as they felt as stiff as boards. Our *confrère* is distinctly to be congratulated upon the successful issue of an unpleasant experience, but we doubt whether, even in the interests of science, he could be tempted to repeat the experiment with an undoubted dose of ten minims only.—*The Lancet*.

doubtless the forerunner of the much-used glycerine tampon of to-day. That the postural treatment was recognized as of value in promoting reposition of the uterus is also indicated in the following: "To heale a woman that hath the matrice out of her natural place: Take a flint stone that hath bean alwaies in the earth and not taken the aire, and put it in some basket covered in a great fire, and when it is verie hotte put it in a little tubbe or barrell and wet it with vinegar cast uppon it, and cause the woman to stand over it to receive the smoake or parfume of it and then let her go to bed. Ye shal after this take the juice of Rue and make a little rounde ball of cotton, whereunto ye shall tie a threede, and then dippe the saied ball in the saied juice of Rue, and put it into the mouth of the matrice, the whiche will incontinent take the ball and drawe it in, and then it will return into his natural place again. But you must binde and tie the ball sure and well, lest peradventure it should remaine within. After this an ointment is to be applied to the reynes of her backe, and laye hotte towe upon it, and then swaddle her as women do young infantes. And so she must be laied in her bed with her bellie upwarde and her heade lower than her buttockes. This must ye doe from night to night three times and she shall be healed. She must also eate hot things in operation, as pigeons and hennes with spices and other like things."—*The American Gynecological and Obstetrical Journal*.

THE WAIL OF A FRENCH PHILANTHROPIST.—Professor E. Masse, of Bordeaux, editor of the interesting *Gazette Hebdomadaire des Sciences Médicales*, like all patriotic Frenchmen, is gravely concerned at the threatened depopulation of his country, and with reference to "the slaughter of the innocents" expresses himself in a recent number to the following effect: "France loses one sixth of her infants before they attain to the age of one year, and the pity of it is that, with a little more care, a great number of them could be saved. Mothers ought to suckle and bring up their own children. Out of 94,000 *enfants assistés* (that is, put out to nurse at the expense of the State), the average number of deaths last year was equal to 68 per cent. M. Lagneau, who drew the attention of the Académie de Médecine to this lamentable fact, is of opinion that the amount allowed for the upkeep of derelict infants is not sufficient; and he likewise advocates the subvention of poverty-stricken mothers who, nevertheless, strive to fulfill the duty toward their offspring which has been imposed upon them by nature. The law recently passed for the protection of infants ought to be far more rigorously enforced." In this country we are not at present confronted with the problem of a diminishing population which is so disquieting to our neighbors; but who shall say that the generation now growing to manhood will be equally fortunate? From "Answers to Correspondents" in various periodicals and other sources of information which it is impossible to ignore, there can be no doubt that the practice of preventing conception is on the increase in our midst. One journal in particular has made

itself notorious for its unblushing advocacy of what the editor calls a judicious limitation of families and has likewise asserted more than once that medical men are in the habit of teaching their clients how to commit the sin against physiology. We are not now concerned to defend the members of an honorable profession against the ignoble slander. An educated man who could be content to prostitute his knowledge in such a manner would deserve to be classed with Sir Pandarus, of Troy. There is one point, however, connected with the distasteful subject about which a few words may be advantageously said. Whenever man attempts to defeat nature's ordinances the results are certain to be, sooner or later, disastrous. Abstinence from coition where there is no excitement is probably not injurious; but when the sexual appetite is habitually stimulated in an incomplete and unnatural manner one or other of the misguided participators in the act, if not both, must inevitably suffer. The practice of restricting the birth of children may possibly become widespread, but it never can become universal. The improvident, the unstable, and the vicious will always continue to propagate as before, and in this way, if there be any truth in the doctrine of heredity, the relative proportion of the unbalanced will gradually augment until in the end they become preponderant in the land. We have based our argument here chiefly on physical premises; but besides the moral aspect of the case, which is more especially the concern of teachers of religion, it has also its esthetic or sentimental side, which must appeal to every one possessing a refined nature. Finally, if an object lesson be needed to enforce our views we have only to point to France. The French are said to be the wealthiest nation in Europe, but what is the good of money without men?—*The Lancet*.

TECHNIQUE OF SUPRAPUBIC PUNCTURE.—Von Dittel (*Wein. klin. Woch.*) has tapped the bladder above the pubes considerably more than 100 times. He washes it out by means of a two-way cannula, and then introduces a Jacques catheter (No. 8), the caoutchouc of which has the property of swelling up and so effectually preventing any escape of urine. The catheter must be changed at least once in eight days; its stopper is to be removed whenever the necessity for micturition is felt—once at least every four or five hours. When introduced in this way the foreign body seems much less likely to induce vesical catarrh than if inserted *per vias naturales*; this is probably due to the absence of the bacteria of the urethra. The puncture has a great tendency to spontaneous closure, which is a manifest advantage when the indications for its employment have been obviated. Von Dittel has always operated in the mid line, but of late Schepf has conceived the ingenious notion of a lateral puncture, whereby the rectus or pyramidalis is used as a sphincter and the permanent catheter done away with. One disadvantage of this method is that the puncture requires keeping open by the nightly passage of a sound or drain. Furthermore, Von Dittel has shown that the depth of the peritoneal pouches inclosed by the urachus,

obliterated hypogastric arteries, and the epigastric arteries is very variable, so that in some cases but a very small portion of the anterior wall of the bladder is free from peritoneum. In such instances lateral puncture may lead to perforative peritonitis, and of this he records one fatal case. He has therefore abandoned Schopf's procedure and reverted to his own former method. He has found, however, that the poorness in vessels of the linea alba sometimes leads to necrotic changes round the puncture, and therefore now adopts the plan, particularly in old people, the operating just at the edge of this tendon.—*British Medical Journal*.

MEGALOGASTRIA AND GASTROECTASIA.—Maragliano (*Clinica Moderna*), in a clinical lecture on this subject, says the prognosis is good if we have to deal simply with disturbances of the motor innervation of the stomach, and if there is no degeneration of the muscular fibers. It is important to note the effect of twenty-four hours' complete rest, for if after this the stomach is able to empty itself after a limited meal the prognosis is good. The author does not believe in the value of the amount of urine passed as a guide to prognosis, for the disease is not a disturbance of chemical or absorption processes so much as one of motility. As regards meals, the author prefers to administer food in limited quantities and at long intervals. A mixed diet with farinacea, well cooked, is better tolerated than a pure meat diet. Fats should be rigorously excluded. Milk and eggs may be allowed, and a little cognac. Wines, except those purified of organic acids, are hurtful. The best mineral waters are either those chemically indifferent or slightly alkaline. Much benefit is to be derived from the daily use of a powder made up of Na_2SO_4 , 4 to 6 g.; Na_2CO_3 , 2 g.; and Na_2Cl , 50 cg., to be taken in a liter of warm water. In bad cases, even where there is no pyloric stenosis, the author advises surgical interference, and refers to ten cases in which the dilated stomach was reduced in size by surgical means, and with eight successes.—*British Medical Journal*.

To the Editors of the American Practitioner and News:

The physicians of Hardin County, Ky., met in Elizabethtown on the 18th of March, 1896, and organized an association to be known as the Hardin County Life Insurance Examiners Association. The objects of said association shall be the study of questions propounded by life insurance companies in all their bearings, thereby rendering them better qualified for the work assigned them. They also resolved to charge five dollars for each examination. Every physician in the county, and those in adjoining counties whose practice extends into this county, are members of said association, and will adhere to the requirements of the association.

E. WARFIELD, *President*.

J. W. O'CONNOR, *Secretary*.

Special Notices.

SANMETTO IN RETENTION OF URINE.—Have given Sanmetto a good trial and find it one of the best preparations I have ever used. Case No. 1—John D., age 70, Ireland, has been troubled for a long time, unable to pass his urine. After treatment with other remedies with no benefit, placed him on Sanmetto with following results: The first day the pus increased in quantity, on second day diminished, by fourth day could urinate himself—before this he had to be catheterized. Dose, one drachm every four hours for the first three days, afterward one drachm three times a day. Discharged in ten days, a complete cure of cystitis.

A. C. FORMAN, M. D.,
Bayonne, N. J. House Phys. Bayonne Hos.

A DOCTOR'S CARBUNCLE.—I thank you for the box of "Sennine." It came just in time for me to try it on myself in a malignant carbuncle which had caused me much suffering.

It affords me pleasure to state that Sennine has benefited me more in three or four days than any of the many antiseptics I have used, among which were Iodoform, Antifebrine, and Aristol, so you can see that "Sennine" has the best standing with me, and I cheerfully commend it to my brother practitioners.

R. M. WELLS, M. D.,
Dios Chemical Co., St. Louis, Mo. Plant City, Fla.

PARTURITION.—Dioivburnia (Dios), in teaspoonful doses every hour after Parturition, is the reliable agent to prevent after-pains and hemorrhage. It being the most powerful uterine tonic attainable, having direct action on the uterus, expelling blood clots, closes the uterine sinuses, contracting the womb and preventing subinvolution.

In severe cases fluid extract of Ergot should be combined one part to four of Dioivburnia. It is the experience of the most progressive practitioners that in all cases where Ergot is indicated, its action is very much more efficacious by combining with Dioivburnia in the above proportion.

ELIXIR SALICYLIC COMP.—Wm. R. Warner & Co.'s Elixir Salicylic Comp. is at the present time, no doubt, the foremost remedy for rheumatism, gout, lumbago, and kindred diseases. In acute inflammatory rheumatism, two tablespoonfuls every few hours, diminished to one tablespoonful every three hours produces desired effects.

It is a pleasant and permanent remedy, and is put up in 12 oz. square blue bottles by Wm. R. Warner & Co. It is advisable to purchase Elixir Salicylic Comp. (Wm. R. Warner & Co.) in original packages to avoid substitution of inferior imitations.

LABOR SAVING: The American Medical Publishers' Association is prepared to furnish carefully revised lists, set by the Mergenthaler Linotype Machine, as follows:

List No. 1 contains the name and address of all reputable advertisers in the United States who use medical and pharmaceutical publications, including many new customers just entering the field. In book form, 50 cents.

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These lists are furnished free of charge to members of the Association. Address CHARLES WOOD FASSETT, Secretary, corner Sixth and Charles streets, St. Joseph, Missouri.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXI.

LOUISVILLE, KY., APRIL 4, 1896.

No. 7-

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

THE LIFE AND CHARACTER OF PROFESSOR EDWARD RUSH PALMER, M. D.

The Doctorate Address of the University of Louisville, Medical Department,
Session of 1895-96.

BY H. A. COTTELL, M. D.

Professor of Physiology, Histology, and Clinical Diseases of the Nervous System in the University.

GENTLEMEN:

"Why, let the stricken deer go weep,
The hart ungalled play;
For some must watch, while some must sleep:
So runs the world away."

Like a plaint of sorrow after shouts of joy; like the cry of pain that calls the kind physician from the circle of good cheer to the bed of suffering; like an elegy of frost and blight after sunshine and soft showers in May-time; like the heart-breaking phrases of the noble funeral march after the bright melodies which have gladdened this festal day, I come with Sorrow's solemn theme and change the scene from gay to grave, while your *Alma Mater* pays tribute to the memory of her most beloved and most gifted son.

Proud of your achievements here, she sends you forth to battle with disease and death, in full confidence that you will "be strong and quit you like men;" but, like showers in sunshine, her smiles are mingled with tears, and her fostering mother's heart, while yearning in tenderness over her latest care, sinks and sickens with an ineffable longing

"for the touch of a vanished hand, and the sound of a voice that is still!" For never in the fifty-nine years of its eventful existence, from among the eminent names upon its professorial list, has the University lost a teacher so bright, so eloquent, so original, and at the same time so beloved of his colleagues and pupils as Professor Edward Rush Palmer.

In the lecture-room we hear no more the cadences of his melodious voice wherewith he made eloquent the truths of science; in the faculty meetings we have no more his sage counsel and spirited advocacy of every thing good for the school; in the sick-room we are helped no more by his skillful touch and learned insight into the mysteries of disease; in our social gatherings we enjoy no more his sparkling wit and brilliant conversation which were the delight of all, and to-day we miss that executive ease wherewith he marshaled the students, staged the trustees and professors, and gave to every item of the programme such earnest attention as made Commencement Day a sweet memory in the mind of every graduate.

Where, now, is that elastic step, that graceful, manly presence, that merry voice, those words of hearty cheer, that touching sympathy, that enthusiastic zeal which gave zest and beauty to every incident of Commencement Day? Gone, gone into the shadows—to return no more! The Death Angel has entered our sacred circle; his "high-born kinsmen" have reclaimed their own. We bow to the Omnipotent; we are dumb in the presence of the Infinite; nor may we hope to fathom the mystery of death.

"Dear, beauteous death, the jewel of the just,
Shining nowhere but in the dark;
What mysteries do lie beyond thy dust,
Could man o'erlook that mark.

"He that hath found some fledged bird's nest, may know
At first sight if the bird be flown;
But what fair field or grove he sings in now,
That is to him unknown."

Let us ponder for a time the lesson of this eventful life:

Edward Rush Palmer was born in Woodstock, Vermont, November 8, 1842. In him were blended the qualities of two historically antagonistic English strains—the Roundhead and the Cavalier—the ascetic earnestness of Cromwell and his praying troopers, the highborn con-

tempt of cant and the easy-going optimism of Prince Rupert and his merry men. I have often heard him say: "My mother was a Puritan, whose fathers fought and prayed and burnt witches, but my father was a Cavalier."

Though his remoter ancestors distinguished themselves in war, his near progenitors were thrifty, plain New England folk, who, as one of their own number puts it, "teased a living out of the rocks, built churches and school-houses, raised children, and made men and women out of them."

One of these indigenous New England products was Edward's paternal grandfather, Dr. David Palmer. Whittier thus sketches his species:

"Born the wild northern hills among,
From whence his yeoman father wrung
By patient toil subsistence scant,
Not competence, and yet not want,
He early gained the power to play
His cheerful, self-reliant way;
Could doff at ease his scholar's gown
To peddle wares from town to town;
Or through the long vacation's reach
In lonely lowland districts teach.

* * * * *

"A careless boy that night he seemed,
But at his desk he had the look
And air of one who wisely schemed,
And hostage of the future took,
In trained thought and lore of book.
Large-brained, clear-eyed, of such as he
Shall Freedom's young apostles be."

Dr. David Palmer was born near Castleton, Vt., in 1789. He was the eldest of twelve children—four boys, eight girls. His father designs him for a farmer, but the boy discovers a thirst for knowledge which the father deprecates. He learns to read in the country school, but for a year or two has access to no book except the Bible, which comprises the family library. This he learns almost by heart. He saves his pennies, and in time procures a few books, which he cons at night by firelight, after his hard day's work upon the farm. Candles were in those days a luxury which his family could not afford.

At nineteen he is in Middletown studying medicine in the office of Dr. Clarke. In the winter he is teaching school. In the summer he

works upon the farm, but, *per aspera et ardua*, he is still studying medicine. At twenty-three he swings his shingle to the mountain breezes at Clarendon. He marries, and sets to work in earnest; but the hills are steep, the winters cold, the people poor, and practice slow. After ten years of hard luck he goes to Poultney; there his practice is still limited. In three years we find him at Thetford—the scene brightens—success is assured. In six years more he is called to aristocratic Woodstock to fill a chair in its new medical school. He is now the peer of the scientists, scholars, and teachers of his day. *Sic itur ad astra!* Or such, at least, was the way to the stars in the New England of that day.

It is fitting to state here that Dr. David Palmer lost his life by an accident incident to an experiment in chemistry during one of his lectures.

Dr. Benjamin Rush Palmer, the father of Edward R. Palmer, was born in Clarendon, Vermont, in 1813. He graduated at "Classic Dartmouth" in 1831. Studying medicine with his father, he took the degree of M. D. in 1834, at the Clinical School of Medicine in Woodstock. He entered upon the practice of medicine at Bellertown, Mass., remaining there till the summer of 1840, when he moved to Woodstock. He gave his first course of lectures in the Vermont Medical College, and was soon after elected to the Chair of Anatomy and Physiology in that institution. It was the custom in those days for men of merit to be employed at different seasons of the same year in teaching at different schools, and the fame of young Palmer caused his services to be required at the Berkshire Medical College of Pittsfield, Mass., and at the Medical College of Buffalo, N. Y.

His reputation soon became national, and he was asked to deliver a course of lectures in the Medical Department of the University of Louisville. This was in the spring of 1853. A call resulted, and in the autumn of that year Prof. Palmer came with his family to Louisville, where he was duly installed in the Chair of Anatomy in the Medical Department of the University. Later he was transferred to the Chair of Surgery, the duties of which, with those of a great practice, he most ably fulfilled till death from overwork terminated his brilliant career in 1865.

Dr. Benjamin Rush Palmer was a man of marvelous natural endow-

ture of his mother tongue, which he spoke with grace, with fluency, and with eloquence. His attainments in science were extraordinary, and he had a presence upon the rostrum which riveted the student's attention to the minutest detail of his learned discourses. I have heard one of his students say that he could clothe the driest bone in the charming vesture of eloquence and poetry. If he was not himself a genius, he was of the kind of men from whose families geniuses may spring.

Such were Edward's fathers to the third generation. But it has been truly said that no child of powerful intellect is ever born of a mediocre mother, no matter how brainy the father may be. And the biographies of men of mark bear abundant testimony to the truth of the statement. St. Augustine, Wesley, Goethe, and Byron, with many other sons of genius, were great because their mothers—not because their *fathers*—were, and the distinguished sons and daughters of Dr. Lyman Beecher, who was married three times and had issue of each marriage, were all the children of his gifted second wife.

Dr. Edward Palmer's mother was of the best old Puritan stock. Her maiden name was Ariminta Dorma Graves. She was the daughter of the Rev. Increase Graves, the Congregational minister of Brandon, Vt. At the time of her marriage she was esteemed the fairest maid in the Green Mountain country. She was a woman of learning, culture, and great moral force. And along with her beauty of person went a beauty of character which made her beloved of a wide circle of friends. She died of an accident in 1887.

Let us glance at the town where Edward first saw the light and the environments of the first decade of his ardent young life. Woodstock is a charming country village which lies nestled in the valley of the Quechee River among the spurs of the Green Mountains. The river stretches like a silver thread among the labyrinth of fern and birch and pine-clad hills, that stand like mighty sphinxes, ever propounding the unguessed and unreadable riddle of nature and the meaning of life to the inquiring mind of youth, while the garrulous waters give no answer as they ripple seaward. It is in such spots as these that poets are born, and the poetic mind is given those rudimentary teachings which fit it for future sublime attainment.

"The beauty of the situation attracted to the town an unusual number of prominent men who made their homes there—some permanently and some for the summer months. Among these were statesmen,

judges, foreign ministers, capitalists, literati, and so forth. The town was literary, cultured, and traveled."

"In one of his addresses Dr. Palmer describes a class of medical schools, now almost out of existence, which flourished formerly in villages throughout New England and the Atlantic States. Their faculties frequently included the best talent the country afforded." Men from the cities who found recreation in teaching during the summer holidays among the haunts of Pan and Sylvanus. "Such a college was a prominent feature in the Woodstock life," and such men as "Alonzo Clarke, Willard Parker, and John C. Dalton of New York, Bartlett of Monsocket, R. I., Dewees and Moore of Rochester, and old Dr. Childs of Pittsfield, were among those who came to Woodstock yearly and lectured in the halls of its medical school." And now and then, it is said, the Autocrat himself would leave his books and his anatomy in Cambridge and come to be a welcome guest of Edward's father while he loafed and talked and smoked with the learned professors about the village, or dreamed and ruminated among the hills.

Among such scenes and among such men were passed the first ten years of Edward's life. But "children's lives, if happy, are not dramatic," and few notable incidents of his boyhood's life are remembered by his family. This much, however, is known: He loved dogs and he hated books. This disinclination to study, on the part of an only son, was most harassing and humiliating to his college-bred and knowledge-loving father. But the ferment of wisdom was nevertheless working out its processes in the youthful brain, and the young mind was gaining in its own way a culture and a knowledge which was to bear abundant fruit in after years.

" Blessings on thee, little man,
Barefoot boy with cheek of tan!
With thy turned-up pantaloons,
And thy merry whistled tunes;
With thy red lip, redder still
Kissed by strawberries on the hill;
With the sunshine on thy face,

Thou hast more than he can buy
In the reach of ear and eye—
Outward sunshine, inward joy,
Blessings on thee, barefoot boy!

* * * *

"For, eschewing books and tasks,
Nature answers all he asks;
Hand in hand with her he walks,
Face to face with her he talks,
Part and parcel of her joy—
Blessings on the barefoot boy!"

A very brief but affectionate letter from the boy to his mother, "a marvel of scratches and scrawls," is in the family archives. It was his first effort at composition, and shows that he had at least learned to read and write.

Coming to Louisville, the same lack of ambition as to learning characterized his school life here. After a period of scarcely more than negative progress in the lower grades he entered our Boys' High School, which was in those days, as it is to-day, equipped with a faculty competent to lay in the minds of its pupils the foundations of a classic and scientific education. Young Palmer failed to improve his opportunities here; his Latin exercises were the eyesore of his instructors, while his chemistry, physics, and mathematics suffered unseemly neglect.

The climax was reached, however, when one night, as the old town clock was striking twelve, a band of students led by Palmer, and disguised as priests in long white stoles, marched slowly into the High School campus, where, "'neath the struggling moonbeam's misty light, with the lantern dimly burning," they buried with due ceremony and solemn rite a copy of the differential calculus in a newly dug grave beneath a linden tree; and, raising high hands heavenward, they swore a long, an unloving, and a final farewell to teachers and to school. Young Palmer's father heard of this, and, being no longer able to maintain patience or exercise forbearance, he berated his son severely on his disregard of his privileges, declared him a hopeless ignoramus, and ordered him to go seek employment in some mercantile pursuit.

This marked the turning point in Palmer's life. The reprimand of his father, whom he loved with filial devotion, cut him to the quick. His pride was stirred, his ambition was awakened, and he resolved then and there to mend his ways and reinstate himself in paternal favor.

He procured an anatomy and, studying it secretly, came after a time to his father, and, asking to be questioned upon what he had learned, begged to be allowed to study medicine. The father tested the would-be student, expressed satisfaction at the result, and gave to the project his hearty consent. The young man entered upon his new employment with zeal, but before he had gone far in his medical studies the sound of war was in the air, and his city became the stamping-ground of armies. He continued, however, to study medicine, and graduated in 1864.

One of the most telling passages in his doctorate address of the spring of 1872, was an account of the struggles of the school to keep up its classes while the South lay prostrate under the scourge of the conflict.

His college life ended, Dr. Palmer enlisted in the army and held the position of assistant surgeon till the close of the war. At this time his regiment was sent on special service to Owen County, Ky. Dr. Palmer accompanied it, and was on duty at that post when the death of his father called him home in 1865. And now came the test of the strength of his young manhood. His father's illness had been prolonged. The family, consisting of five girls and one son, was large and expensive. Provision for its support through life insurance had not been made, and most of the father's savings had been swept away by the exigencies of the war. The mother was advancing in years, and the sisters were mostly still in school. The young doctor was not yet twenty-three years old, and, saving a year of service in the army, he was without experience, while his ability to make his way in professional life was altogether problematical. How ardently he buckled on the armor, and how bravely and nobly he acquitted himself of his heavy task needs no more than mention here. It showed the metal of which he was made.

He at once sought and found a position in the City Health Department, entered upon practice, and began to fit himself for a professorship by enlisting as an assistant to Dr. D. W. Yandell in the old Green-street Dispensary. In a year he is demonstrating anatomy in the University of Louisville, and in two years he is called to the chair of Physiology in that institution, winning the place against formidable opposition by the force of merit, hard work, and distinguished talent for teaching. His practice grows anon, he is chosen to fill important offices in our municipal government, and we see him with an ever-enlarging influence, professorial, professional, and political, the Palmer whom everybody knew and loved when death took him from us: "A great, overgrown

boy, big of brain and big of heart, at the same time a scholar and a man of the world."

An anecdote characteristic of the man, and not without a moral for the younger members of the guild, is told of Palmer at this era of his career by his colleague and most intimate life-long friend, the eminent Professor Turner Anderson. They were both struggling young medical fledglings in neighboring offices. Edward, with daring prodigality, had purchased the regulation physician's visiting list paged for twenty-five patients weekly. Turner, with prudent economy, had denied himself the luxury. The weeks dragged by, and Palmer had secured no names for entry in his book. One day he walked into Anderson's office and offered to sell him the superfluity at a very reduced figure. Anderson paid the price and took the book. Seating himself, he began to turn over the blank leaves of the list, and to note its headings. Turning to the department headed "*Wants*," what was his amusement to see written in Palmer's full, flowing hand, 100,000\$. Poor Palmer never secured that item of his desire, but had he lived another decade it would doubtless have been his.

My acquaintance with Palmer dates from the fall of 1870, when, as a fresh matriculate, I took my seat for the first time in the lecture hall of the University. He entered the room, after a lecture by another professor, to make a simple announcement. His erect and manly form, the glance of his dark, bright, intelligent eye, the lines of thought upon his youthful face, and the ring of his rich, sonorous voice made an impression upon me, which, had I never again seen him, would never have been effaced. His pose in the lecture-room reminded me of the pictures and statues I had seen of Henry Clay—erect, earnest, strong, and with gestures suited to the word. He spoke with great rapidity, but always with clearness. He had a fund of wit, and often rose to eloquence; but his lectures were nevertheless always serious efforts to impart truth. The spontaneity of his wit was wonderful. "Mr. Smith," said he one day in the quiz, "what is the chief proximate principle of the fifth class?" Smith, a bashful youth from the country, blushed and hesitated, and began to scratch his ear. "You have it," shouted the professor in a merry voice, "your finger is on it—it's *your ear*" (*urea*).

Palmer had the faculty of illustration by homely similes in masterly degree. In lecturing on the physiology of swallowing, for instance, he would say: "The food is first ground up by those millstones, the teeth, and, having been formed into a bolus by the tongue and palate,

it is ready for the first stage of deglutition." Then he would say: "Did you ever see a pig go under a loose board on a fence? Down goes the pig's nose, up goes the board, in goes the pig, and that is the way the bolus of food goes under the palate veil into the pharynx."

He was a rapid writer upon the blackboard, and illustrated his lectures with quick, off-hand drawings that would have done credit to a professional artist.

Dr. Palmer had a prolonged attack of inflammatory rheumatism in youth, and this, with the overwork incident to his struggles in professional life, caused him to be in early manhood a thin, anemic dyspeptic, who looked as if he might not be long for this world. He was vertiginous at times, and again at times he would fall from sheer weakness as he walked the streets upon his professional rounds. However, he rallied from this condition rapidly, and came in a year or two to be a perfect specimen of physical manhood.

At this time Palmer was deeply religious. He was a devout member of Christ Episcopal Church, and for a time was superintendent of its Sunday-school. He was a fair biblical student, and could quote scripture correctly and with readiness. Later he read much in Darwin, Huxley, Mill, Maudsley, and Spencer, and became a convert to their views. He called himself agnostic with Huxley, and preferred to say he did not know to accepting upon faith what could not be proclaimed with mathematical certainty. He never, however, lost his interest in the church and its work. The esthetic features of its ritual made strong appeal to his sense of the beautiful, and its stately hymns of sorrow, sympathy, and solemn joy inclined him to reverence, if not to worship. Once, on hearing the touching music of "Lead, kindly light, amid the encircling gloom," and pondering the sentiment of the sad, trustful words, I heard him say: "If I ever go back to Holy Mother and die in the faith, her beautiful hymns and music will bring me there."

Palmer had no concealments. Like Byron he "wore his heart upon his sleeve." His faults were known to everybody; but his good qualities were often overlooked.

"In men whom men condemn as ill,
I find so much of goodness still;
In men whom men pronounce divine,
I find so much of sin and blot."

As a business man Dr. Palmer was careful and painstaking, and at the time of his death he was possessed of a large income. He was, however, ebullient in his nature, free in his dispensations, and prodigal in his charities. He could no more resist the appeal of the needy for financial relief than he could resist the cry of suffering for medical ministrations, and thus during the long years of his general practice his time and his money were given freely to the suffering and needy poor.

As a practitioner of medicine Dr. Palmer's career was phenomenal. He practiced general medicine for twenty years with full success, and then, turning his attention to a specialty purely surgical in character, achieved in less than a decade a national reputation and a large *clientèle*. His first essay before the American Association of G. U. S. attracted marked attention, and his second essay, in 1893, secured him the presidency of that distinguished body of surgeons.

As a diagnostician Dr. Palmer had few equals. He was also an able therapist, and he supplemented his scientific skill with such tender and sympathetic ministrations to the sick that he was beloved by all whose homes he entered. As an operator in his especial field of surgery he was acknowledged by his peers to be *facile princeps*.

Dr. Palmer made several original contributions to science which will preserve his name in medical annals. He devised some new procedures in operative surgery, and made one valuable contribution to therapeutics. One of these surgical procedures is the imprisonment in the tissues of the local anesthetic, cocaine, during certain operations, thus keeping it out of the general circulation, where it is not needed and might do harm. The other is the discovery of the efficacy of boric acid, internally administered, in cystitis.

As a writer he wielded an ever-ready pen, and contributed many valuable papers to medical literature. He wrote with great force and fluency, and with a diction that often gave to cold scientific truth the fervor and glow of true poetry. He occasionally essayed verse, and always successfully. His taste was exquisite, his thought clear, and his ear musical and correct. If he had essayed a literary life he would have been one of the first essayists, poets, and orators of the land. In conversation he was brilliant and delightful; his humor was always kindly, and the venom of sarcasm never polluted his tongue. No man in his day could make a better after-dinner speech.

Dr. Palmer was a natural musician. He early in life evinced decided

musical talent. He played the flageolet in childhood, the flute in boyhood, and sang throughout his manhood, in a rich, full barytone, songs, sentimental and religious, to the delight of his friends, professional, amateur, and unskilled in music. His rendering of our "Old Kentucky Home," at the banquets of the Kentucky State Society, was always the most heartfelt feature of those delightful reunions.

But it was as husband and father in the circle of his model home that the beauty of his character and the generosity of his noble nature found full expression. Dr. Palmer was married, in 1868, to Lucy Jane Brent, daughter of Colonel Thomas Y. Brent, of Paris, Bourbon County, Ky. The marriage was a happy one, and bore fruit in three children—a daughter and two sons—who were ever the idols of the fond father's heart. He afforded them every opportunity for happiness and culture. He lavished upon them the wealth of his love, and superintended with enthusiastic zeal the education of each to the minutest detail. That the children are worthy of such a father we have abundant proof; but the saddest thought in this, our elegy of sorrow, is that he should have been snatched from them with all his liberal plans for their advent into real life unrealized, and before the flower of their tender lives should have had time to put forth more than promises of fruitage. To the widow and the children go out our sympathy and condolence. May God "temper His winds to the shorn lambs."

Dr. Palmer died of an accident on the night of the 5th of July, 1895. He had recently taken to the bicycle for exercise and recreation. On this night he rode out upon the boulevards, and returning an hour or two before midnight, lost control of his wheel, collided with another rider, and was thrown with such violence upon the curbstone that his skull was fractured at the base. He was taken unconscious to the Norton Infirmary, where all that science, love, and friendship could do was done for his restoration, but in vain, and in an hour, "painless, he attained the end of pain." His death abundantly attested his personal popularity. No man in the history of this city was ever honored by a larger funeral; nor did any funeral ever comprise a greater number of true mourners.

It is a notable coincidence that accident should have caused the death of Dr. Palmer's paternal grandfather, his mother, and himself. It is, moreover, touching to note that his last contribution to literature was a characteristic and funny squib relative to the rapid progress of the bicycle craze among the elderly and staid members of the medical pro-

fession. This he sent to the *American Practitioner and News* a few days before his death.

Gentlemen, I have recited as best I could the incidents of a remarkable life, and have attempted to portray, in homely sketches, the character of a benevolent, forceful, versatile, original man, a genius among the sons of men. What lesson has such a life for us? If I read the lines aright, they are untiring energy, great capacity for work, singleness of purpose, faith in one's self, faith in humanity, and faith in the final triumph of good. Such was the creed that Palmer's life proclaimed, whate'er his words might be. He had no sympathy with asceticism or pessimism, and no patience with hypocrisy or cant. "The windows of his soul were thrown wide open to the sun," and Apollo, the god of sunshine, music, poetry, and medicine, ever held him in fealty if not in worship.

His sunny spirit has gone out from the circle of the day, and the solemn question, where? with its awful significance, bids us pause once more ere we say farewell. Has it gone, like a meteor, lighting for a moment the dismal void with the scintillations of disintegration and individual annihilation? Has it gone, like some comet, upon a curve which mathematically admits of no return, to sail aimlessly forever deeper and deeper into the infinite abyss? Or has it, like gentle Hesperus, but faded for a season among the many-tinted clouds of evening twilight, to shine anon with fairer luster in the morning sky? Let us have faith to hold it so.

"For Love will dream, and Hope will trust,
Since He who knows our need is just,
That somehow, somewhere meet we must.
Alas for him who never sees
The stars shine through his cypress trees!
Who hopeless lays his dead away,
Nor looks to see the breaking day
Across the mournful marbles play:
Who hath not learned, in hours of faith,
The truth to flesh and sense unknown,
That Life is ever lord of Death,
And Love can never lose its own!"

LOUISVILLE.

"DOCTORS AND DOCTORS."

Regular Medicine v. the Medical Pathies; The Alumni Address of the University of Louisville, Medical Department, Session of 1895-96.

BY CHARLES M. ROSSER, M. D.,
Superintendent North Texas Hospital for the Insane, Terrell, Texas.

Mr. President, Ladies and Gentlemen, Gentlemen of the Class of 1896, acknowledging the distinguished honor, I am before you to-day, the proud representative of those who have preceded you.

Founded in 1837, and having enjoyed a well-merited confidence of the people, the Medical Department, University of Louisville, has, during the last half century, furnished to the profession of the several States its full quota of recruits for the increasing membership, and every faithful alumnus, valuing his legacy of an honorable parentage, has been received without question wherever his lot has been cast. The influence of heredity, which has come to be so well understood as a potent factor in the maintenance of health and the production of disease, appearing equally operative for the development of professional character, thus it is that your elder brothers, long since numbered by the thousands, having taken inspiration from the lives and teachings of our illustrious fathers, have deserved the recognition which has been accorded them. Go where you will, whether in the land of magnolia and orange, or to the West a rugged pioneer, or throughout the crowded centers of the East and North, and those who have come and gone, as the old University, "has gone forever," are found at their posts of duty. Whether young or old, rich or poor, they are men of science, a blessing to their individual communities, and in the main a creditable reflection upon an *Alma Mater* which all delight to honor.

As a messenger from the great army it is my happy privilege to greet the graduates of to-day, and bid them welcome and god speed! Welcome from the student life of the college hall and class-room to the wider, deeper, and more earnest student life of the office, the laboratory, and the bedside. Going back in grateful memory through a scant dozen years, I stand for the first time upon its broad approaches, and, looking upward at its massive columns and weather-beaten walls, contemplate the grandeur of the edifice which remains a monument to the purposes of its founders, and, painfully realizing my individual insignificance, shrink from the self-imposed task, and all but fear to enter. These are but common impressions which come alike to each of you.

They will not be forgotten, and yet of all that came or may come, in tenderest recollection will be cherished the kindly words and reassuring smiles of our noble and generous-hearted dean, who took the wanderer in and put a new song in his mouth.

Henceforth the ambitious aspirations evolved from childish dreams and youthful fancies, and discovered timidity at the period of mental adolescence, become the pillar of cloud by day and the pillar of fire by night. You have followed this ambition as a guiding star along a well-beaten pathway, illumined by floods of light. It has brought you to the open portals, which, having passed, the years that are gone become history, those that are to come an ever-receding future; and, as an individual upon whose shoulders have been placed the full burden of life's responsibilities, you come for the first time face to face with the awful present. The harvest is indeed great, and the noble calling which you have chosen invites you to a field where acceptable laborers are unfortunately few.

Verily, to the making of many doctors there appears to be no end, but it is especially true in America that there are "Doctors and Doctors."

Doctors called allopaths, which is untrue,
Homeopaths, *a la* the extract of dew,
Et al. with faith cures, these are a few
Of the "Doctors and Doctors."

Doctors, good doctors, by training and skill,
Others by having been passed through a mill,
Deficient by nature, it must remain still,
There are "Doctors and Doctors."

Doctors so called, and doctors in fact,
They who have merit, and others who quack,
But though in round numbers there is never a lack—
There are "Doctors and Doctors."

Doctors, the safest, who best understand
Their limited powers and the frailness of man;
They are seeking for aid everywhere that they can;
Simply doctors——.

The true physician, having schooled himself to the mastery of the science so far as taught, and being a man of proper gentleness, is neither an ignorant pretender or a boastful bigot, and therefore is not a quack. Refusing to restrict himself to the investigation of exclusive principles and practices, he adheres to no sect or pathy, and therefore the term

allopathic, as derisively applied to the regular physician, is repudiated and flung back into the teeth of those who invented it. The regular physician is the only true eclectic, and therefore misnamed eclecticism as a separate system has gained no special attention. As an illustration of the fact that the average man is more unphilosophical in his judgment relative to medicine than to other subjects, it may be stated that, although for its resting place there is no foundation except the alleged errors and failures of regular medicine, there has grown, as a sickly excrescence upon public sentiment, a so-called medical system known as homeopathy, which has attracted in many places a respectable following. History, however, indicates that its blight passes by in time as an ordinary epidemic. In Germany, where lived Hahnemann, its founder, its apostle, and its prophet, the practice of homeopathy is under legal disfavor, and the indications are that like action will be taken throughout the Continent. In this country, where the widest range of liberty is allowed, conditions are most favorable to deceptive methods and practices, and although homeopathy will remain without broad recognition, legislators have tolerated the scheme, and in some instances offer to it protection which would be denied other less deceptive concerns. Let us see what are its best claims to scientific recognition and public confidence. The Encyclopedia Britannica, which will hardly be considered prejudiced authority, is very emphatic in its discussion of the subject. I quote: "In order to ascertain the esteem accorded to it in the land of its origin inquiries have been made of neutral and unbiased authorities, and the general result is that it has no scientific recognition, but that many of the people believe in it, and consult practitioners who profess to practice it. . . . In all countries the doctrine of homeopathy is still without broadside recognition, and certain it is that in England its chief representatives are anxious to cease their existence as a distinctive school. . . . It was a very essential part of Hahnemann's teachings that Nature is a bad physician, and not to be much trusted; that drugs are the real curative agents provided by the beneficence of the Almighty; that drugs given to healthy persons have a power of producing symptoms of disease." Dunglison, a standard authority with all classes of practitioners, defines homeopathy

lionth part of a grain of charcoal, for example, is an authorized dose." Could any theory be more fanciful?

Hahnemann despised any deep study of disease, believing that disease existed in the complaint of the patient only. On page 103, in his principal work, "The Organon of the Healing Art," he says: "All that a physician may regard as curable in disease consists entirely in the complaint of the patient and the morbid changes in his health perceptible to the senses." He therefore regarded the aggregation of the symptoms as the disease itself. Hahnemann also taught that these symptoms were of spiritual production, and that remedies therefore were only able to combat them by being spiritualized according to the processes which he described. On page 69, same volume, are found these words: "Our vital force, that spirit-like dynamia, can not be reached or affected except by a spirit-like process, resulting from the hurtful influence of hostile agencies from the outer world, acting upon the healthy organism and disturbing the harmonious process of life. Neither can the physician free the vital force from any of these morbid disturbances, that is, disease, except likewise by spirit-like alterative powers of the appropriate remedies acting upon spirit-like vital force." How few of those who profess belief in homeopathic views would be willing to admit their discipleship of spiritualism and faith in Christian science, and yet here it is recorded in the writings of the homeopathic messiah.

Another of Hahnemann's absurd teachings, and one which enjoys the distinction of alone remaining as an acknowledged article of faith, is, that in order to cure a disease a medicine must be introduced into the body in so small a dose that its effects shall be imperceptible, which if given to a healthy person in toxic quantities would produce symptoms like to those of the disease sought to be cured. In line with this so-called law of *similia similibus curantur*, follows also the doctrine of increasing the power of a drug by its subdivision or attenuation, the principles of which are trituration, shaking, and dilution. These processes develop, according to Hahnemann, in some way which he does not attempt to explain, what is called by him the "spiritual power which lies hid in the inner nature of the medicine." Insisting upon the

edies were selected according to homeopathic law. (Organon, page 181.)

Ridiculous as it must appear, but quite as logical as other theories mentioned, it was held by this peculiar teacher that "homeopathic remedies will act with the greatest certainty and efficacy, particularly by smelling or inhaling them in the form of a vapor emanating continually from a dry pellet impregnated with a highly rarefied medicinal solution, and contained in a small vial." "This is much superior to all other modes of administering medicine by the mouth." (Organon, page 224.) It is recorded of an English witness (Encyclopedia Britannica) that after many years of "anxious experimenting he discovered decided results from the smelling of medicine, but more especially by means of medicines contained in closed vials held in the hand."

If the agencies selected, whether to be taken within the body, inhaled by olfaction, or merely thrown into an association, were parts of any vital force or organization there might be some possibility of a chemical reaction or change, or if they possess natural or elementary force, as, for instance, electricity, some rational explanation of their claims might be made. But what shall be said in defense of them when the infinitesimally small quantities administered are composed only of dead matter?

It would seem that no further mention would be required, but in order that a full understanding may be had we will glance briefly at *materia medica*. Strong tinctures are made of those substances dissolvable in alcohol, and are known as "mother tinctures." Substances incapable of solution are reduced to as fine a powder as possible, and triturations are made with sugar of milk. Dilutions and subdivisions are upon the centesimal scale. The thirtieth attenuation having been reached the drug is regarded as a high potency. In other words, according to the theory, the less of the medicine used the more positive the action to be expected. People understand that infinitesimal doses are claimed to be administered by homeopathic practitioners, but there are few who realize what the word infinitesimal means in this connection. Browning gives this very illustrative calculation: "Weigh out a grain of any substance, it can be held on the point of a penknife. To make the third potency the grain must be dissolved in one hundred pints of fluid. This is equal to about half an ordinary barrel. If the grain were dissolved in the reservoir of the Brooklyn water system the water drawn from the water faucets would equal about the sixth

potency. Sprinkle the grain upon the bosom of old ocean, and the water of the sea would become medicine of about the twelfth potency, and to make the thirtieth potency from the grain, according to the centesimal scale as recommended, it would require more liquid in volume than the bulk of the visible universe." Despairing, perhaps, of further practical subdivision, the theory, to continue its imaginative wandering, claims that by shaking and rubbing still greater spiritualization for the remedy can be attained. Although to the normally balanced mind it would seem impossible to increase nothing by dividing it, such a theory can be aptly illustrated by an effort to increase the estimated value of the cipher nought by removing the circular line which marks its worthless existence.

In the later writings of Hahnemann he says: "If we wish, for example, to attenuate a drop of sun dew to the thirtieth degree, but shake each of the bottles with twenty or more succussions from a powerful arm in the hand of which the bottle is held; in that case the medicine which I have discovered, the specific remedy for the frightful epidemic whooping cough of children, will become so powerful in the fifteenth attenuation that a drop given to a child in a teaspoonful of water would endanger the life of such child; whereas, if each dilution bottle were shaken but twice (with two strokes of the arm) and prepared in this manner up to the thirtieth attenuation, a sugar globule the size of a poppy seed moistened with the last attenuation cures this terrible disease, whooping cough, at a single dose, without endangering the life of the child in the slightest degree." Surely the printer boy who first put in type this reckless arrangement of words smiled at the folly of their meaning!

Dr. Samuel Swan ten years ago published a price list of homeopathic medicines, from which we quote the following: On page 15, under the name of *lachryma filia*, he offers for sale the tears of a young girl shed during great distress, presumably to be given in largely diluted doses to another young girl suffering similar mental anguish or physical pain. On page 6 is listed as a remedy the "extract of carbuncles of the neck, very severe," together with other equally and more disgusting suggestions. Following out the same leading the price list also contains *rubrum*, *flava*, and *ceruli iridis*, or red, yellow, and blue rays of the spectrum. Lunar or medicinal moonshine, a remedy said to be potentized by the through passage of the moon's rays, is also recommended. What shall we say? That rational men find it possible to believe such nonsense; or shall we

charge the teachers of such theories that they only profess adherence, and for reasons satisfactory to themselves they are reproaching the Creator with having denied them a reasonable intelligence. For my part I can not conceive of a condition of mind that would, after an investigation of sufficient length to be called a college course, tolerate such beliefs, and at the same time cunning enough to disguise its imbecility. It is the business of the professional adherent to chose a horn of the dilemma. As for the people who patronize them the estimate must be very different. They are generally those who, as for instance business men, are deeply concerned in important affairs, and therefore have little time to study abstract sciences on their own account, or among churchmen, who, wise enough in spiritual matters, confound the things of this world with those that are to come, and are thus easily misled by impalpable and mystifying suggestions. It is also true that the average man is not a statistician, neither is he prepared to make scientific discriminations.

Forgetting for the most part that disease tends toward recovery, he ascribes to the ability of the homeopathic practitioner under whose directions recoveries are observed a success attributable to Nature, described by Hahnemann as a bad doctor and unworthy of trust. If death unavoidably, or through lack of knowledge on the part of the physician, occurs in a family, it frequently happens that dissatisfaction results, and subsequently a practitioner who pretends to operate upon a different or improved theory is sometimes called. In such a case the reasons for the change are no more explicit or substantial than the reply of the guest who answered a usual question as follows: "What did you give me this morning, waiter? If coffee, bring me tea; if tea, bring me coffee." It is needless to add that generally, upon moderate experience and a little reflection, such people return to place their trust more firmly in the regular profession. It happens sometimes, however, that observation teaches nothing. As the loss of one soldier "counts for little in the news of a battle," so a death here and there resulting from deceptive negligence attracts no attention to its cause, although in truth a public calamity at times, and always a personal one to those families wherein they occur. In view of the inconsistencies and

better instincts, renounce the vagaries they have learned, withdraw from the association of their former friends, study medicine, and become doctors, to make honorable members of the profession. The greater number, however, of those who study the homeopathic creed, finding their perceptive powers able to distinguish its absurdities, for reasons best known to them retain the title as a trade-mark, while they purchase books written by regular doctors, and undertake, with the imperfect knowledge thus to be gathered, to practice medicine as do physicians, disguising their remedies, as is now quite possible, by the use of triturates, alkaloids, concentrated extracts, etc., so well prepared by manufacturing pharmacists. This is the course adopted by the majority of those who are reputed in their communities as successful physicians. The fact is that homeopathy as a system is well nigh dead, as can be proven by homeopathic authority of the highest order.

Charles Neidhard, one of the most apparently honest believers in the law of *similias*, makes the statement that "for some peculiar diseases the homeopathic law requires us to give large doses."

A writer in the New York Medical Times (homeopathic), November, 1891, states his opinion thus: "It is not too much to say that clinical experience does not verify the half of the symptoms to be found in Allen's Mammoth Collation of *Materia Medica*, and, like the man who never speaks but half the truth, one is left to wonder which half of the recorded symptoms are true and which are false. Many of the prominent drugs of the *materia medica* were proven to the thirtieth potency, that is to say in the decillionth dilution. What manner of man must he be who can believe that there is an atom of a drug in a drop of that dilution, or the least degree of drug force?" The Northwestern Journal of Homeopathy admits the decadence of the sect in the following: "The practitioners of homeopathy forty years ago who are now living can scarcely recognize the merchantable article called homeopathy of the present day. The doctors who really practice homeopathy are very few compared with the proportion who did so forty years ago." No comment is necessary upon the remarks of Dr. James G. Bell, president of the International Homeopathic Association (1892). From his presidential address are taken these words: "Our society numbers in active living members about one hundred and fifty, and it would be a generous estimate, I think, to double the number as representing in the whole world all those who may be called true homeopaths or are becoming such. If we have patients going to other

cities, especially in the West and South, how rarely can we recommend a physician to them, and if the patients are going to Europe or England we know of but five or six men in the great cities to whom we can intrust them." The most remarkable of all the admissions, however was made by the Homeopathic News of March, 1892. It is a series of confessions which, remaining unchallenged, must be regarded as eligible testimony. They are recorded as follows :

"We venture to assert that, had not our school drifted away from the practice of forty years ago, it would have been dead and buried long since. We have drifted away from the practice of giving a pellet of the two hundredth or higher, and waiting thirty or sixty days for its curative effects; from a prescribing of a high dilution by smelling dry pellets, the same prepared by shaking a thousand pure pellets with one medicated by the ten thousandth. We have drifted away from the belief in provings made by taking a single dose of the one thousandth, thirtieth, or third even, and then recording all the symptoms felt by the prover, natural symptoms, colds, diarrhea, etc., for the next sixty days. We have drifted away from the carrying of a pocket repertory to the bedside of the patient, and recording the symptoms in columns, a weary search in repertory until a mechanical *similimum* was found. We have drifted away from the days when our pseudo-surgery was a disgraceful farce, when we expected silica to open felons, or hepar sulphur to lance an abscess. We have drifted away from the narration of miraculous cures with the highest attenuations, which were not cures at all, but a spontaneous finale of self-limited disease. We have drifted from the days when our practitioner would sit by the bedside of a patient dying of hemorrhage hunting in the repertory for the indicated remedy without recourse to the tampon or ergot while the vital fluid was ebbing away."

Having by their own admission "drifted away" from the methods logical to such impossible beliefs, it is reasonable to suppose that but little except the name remains, and that regular scientific medicine, looking back through the ages wherein it has progressed from crude beginnings, will soon observe along its track another whitening skeleton left to moulder and decay. And there are reasons for its death, and none that it should live. Ridicule is not unseemly in the discussion of such

1. That the only proper treatment for disease consists in the administration of a remedy "capable of creating in the healthy body symptoms most similar to those of the disease," in accordance with the law *similia similibus curantur*, translated to mean likes are cured by likes. (Organon, page 103.)

If this alleged law was a law in fact, emetics would be best employed to control vomiting, purgatives to arrest that which they are known to cause, stimulants to cure fever, excitants to allay and prevent convulsive seizures, opiates and anesthetics to arouse from a fainting fit or coma, slight friction to cure inflammatory conditions; and with equal justification the windpipe would be compressed to relieve suffocation, and to outgeneral the monster, Death, the surgeon's knife would scarify the heart. There is no universal law in medicine, and diseases are best treated, some by *similias* and others by *dissimilias*; for example, if nausea is present by reason of a depressed state of the stomach's nerve supply, small doses of an irritant emetic like ipecac might be of possible service, whereas, if nausea occurs from an irritability of mucous membrane or nerve filaments, any substance capable of producing emesis would aggravate the condition, and a soothing remedy would be selected. If an alvine disorder depends upon a torpid liver, the administration of moderate doses of medicine, such as magnesia or mercury, will do good; but if inflammation or other active conditions be the cause, local irrigations for their healing effect, and an opiate to arrest abnormal activities, will be indispensable. Antitoxin claims to purchase immunity from diphtheria, not by the introduction of a medicine capable of producing "symptoms *like* those of diphtheria," but by the introduction of a substance capable of checking the proliferation of the microbe upon which the disease depends, and vaccination against smallpox is not upon the theory of similars, it being a fact that by it *not symptoms like* smallpox are produced, but that smallpox itself is manifest in so mild a form as to be harmless to human life, but which makes sufficient impression upon the system to prevent a subsequent attack.

No facts are more clearly established than that antipyretics reduce fever, anesthetics suspend intelligent animation, alcohol and strychnia lift from depression, and that opium relieves pain and arrests convulsions. None of these actions occur in obedience to the so-called law that "likes cure likes." *Similia similibus curantur* is therefore not a law, and approaches no such dignity. It is a generalization which may

be occasionally applied, but never to be useful in its exclusive sense, or in the employment of attenuated drugs.

2. Proposition second in the homeopathic platform is, "That the totality of the symptoms is the only guide to the physician in administration of remedies, and that all a physician may regard as curable in disease consists entirely in the complaint of the patient and the morbid changes in his health perceptible to the senses." In other words, the theory is that all derangements are functional, and that there are no pathological processes. The reverse is known to be true, else all *post-mortem* investigations would result negatively, and the microscope would seek in vain for that which it now easily discovers. Modern medicine has demonstrated beyond possible doubt that diseases are of material origin. In many the disease-producing germ is readily isolated, and in other cases the causes are definite, and generally of a visible character. Thus it is that the unsupported contention as to the immaterial, intangible, dynamic, or spiritual origin of disease falls by its own weight of error. When this theory was promulgated by Hahnemann he also taught that chronic diseases were due to a humor in the blood known as the itch ("*psora*"), to which he attributed the majority of internal ailments, such as rheumatism, diabetes, mania, and cancer. The itch he believed to be of spiritual origin, but since the microscope has exposed the ill-shapen parasite (*acarus scabiei*) to the gaze of an offended and long-suffering people, leading to his easy destruction by the application of sulphur ointment, the itch king crawls about uncrowned, and the homeopathic vagary of his celestial ancestry lives only in an obsolete literature.

The spiritual causation of drop-wrist and painters' colic lost its identity as an idea when chemistry became able to recover in its essential quality the lead which had been deposited by slow absorption. Pneumonia, diphtheria, the essential fevers, and many other affections are proven to be due to specific germs which, like those of the great scourge, consumption, are capable under appropriate conditions of engrafting themselves upon new tissue and there reproducing in kind. Possibly the subject of gout would prefer a belief in spiritual martyrdom, but the microscope is no respecter of persons, and in demonstrating the presence of uric acid in the blood has rendered material and ordinary to the senses this painful malady. And so it is that scientific medicine, laboring earnestly at the bedside and in the laboratory, makes plain the real causation of disease, and relegates this second

homeopathic absurdity to the belief only of those who, blinded by prejudice, refuse enlightenment.

The third plank, claimed as the therapeutic basis, relates to the "provings" of remedies by the administration of infinitesimal doses to persons in health. This error becomes palpable at a glance, and its folly is illustrated in the common prescription of minute doses of belladonna in scarlet fever. It reddens the skin in toxic doses by its effect upon the capillary blood-vessels, but can assume no control over scarlet fever, this being a self-limited disease of specific origin.

You have followed the tedious details and will understand the well-proven assertion for which you are prepared, there are no "schools of medicine." There is a school of medicine, a science of medicine, and one medical profession. A school of medicine was founded by Hippocrates during the earlier civilization. Its detractors derisively term it the "old school," insinuating a lack of progress and a prejudice against reform. Such insinuations are as unjust as untrue. It is the "old school" in this, that men of medicine in the remotest past, who blessed the world by worth and work, acknowledged their allegiance. Such venerable years are grandly honorable, recording as they have the services of those illustrious dead, the memory of whom shines out like stars in nights of darkness.

There is one science of medicine—that which includes anatomy, pathology, chemistry, materia medica, surgery, psychology, and hygiene. Its broad and comprehensive range contemplates every collateral branch, throwing the faintest light toward the solution of questions interesting to the biologist, the sanitarian and the surgeon. It seeks to understand man's mental and physical evolution, the philosophy and nature of his construction, the normal operations of his various organs and their several intimate and delicate dependencies. It follows the *post-mortem* knife as an intelligent master; discovers the changes consequent to organic disease, thus dragging from the realm of death imperial weapons to defend the living. When physiological functions are disturbed, scientific medicine, based upon its proven facts, engages to arrest deflection, to aid nature in nature's way, to repair the damages done, and to bring back to normal organization the disordered functions of the body. Devoid of selfishness, it particularly seeks the prevention of disease, recognizing this as the surest method of accomplishing its most sacred aims. Its results in this field alone have secured for the science of medicine the grateful acknowledgments of the civil-

ized world. When, through imperfections of human knowledge, inattention to sanitary teachings, or disadvantages in line with particular callings, disorders are not prevented, the science of medicine, bringing to bear its wealth of experience and accumulated knowledge, becomes the champion of humanity, and, battling with undaunted courage, is able to recover injuries, assuage fever, relieve pain and distress, thus lessening the severity of man's affliction, and sometimes lengthening out the thread of life.

There is a medical profession, and only one! It recognizes all beneficent principles, ignores all dogmas, refuses all limitations, and leaves the physician to the application of his judgment as to a diagnosis, the selection of remedies, and methods for their employment. Exclusivism, whether from prejudice, moral cowardice, professional ignorance, or as a cater to an artificial sentiment, has no place and is not tolerated. Its members have labored more assiduously perhaps than other men. They have made the science what it is, and for themselves established in the hearts of those who follow a more enduring monument than piles of stone. No sufferer, sleeping through the throes of travail or on the surgeon's table, but wakes to bless the name of Long, who discovered the anesthetic properties of chloroform. Local anesthesia, as produced by the use of cocaine, will render the name of Koller illustrious so long as there are minor injuries to be repaired and "thorns in the flesh" to be taken away. The torture of the actual cautery, endured by the bleeding stump before the days of Paré, was strangled from existence by the ligature he brought. Jenner, by the discovery of vaccination, has robbed a loathsome scourge of its terrors, thus saving from smallpox the lives of millions every year to live unconsciously his debtor. Hydrophobia, that dreaded and terrible contagion, has been disarmed by the greatest scientist of France, and Pasteur will never die. In our own day the discoveries of Klebs, Koch, Lister, and many other co-workers, have brought to light the germ causation of disease, together with appropriate antidotes—and here we stand with head uncovered, just past the gateway of a coming knowledge, each day to mark the advent of a new thought and further triumph. From none except the regular profession has help come, and to them a grateful people must continue to look for original work and intelligent appreciation.

Such, briefly, are the teachings of the school of medicine, the principles which the science promulgates, the scope of its investigation, the

mission of its devotees, the history it has written, and its promises for future usefulness. Planted upon this ample foundation the medical profession claims preoccupancy of the medical field, and invites to its honorable friendship and alliance such sincere and intelligent men as, having educated themselves in line with the physician's needs, desire to devote their energies and talents, giving at all times the best services of which they are capable. Let such men enter the profession, not as pirates, thieves, or robbers, but in at the strait gate. Having entered, there is no restriction to individual views.

The Code of Ethics is the regular doctor's creed. The only clause in that code in any way restricting individual belief or freedom in practice says: "But no one can be considered a regular practitioner or a fit associate in consultation whose practice is based upon exclusive dogma, the rejection of the accumulated experience of the profession, and the aids actually furnished by anatomy, physiology, pathology, and organic chemistry." What more can an honest and candid man desire than to be allowed "to know the best he can, and do the best he knows"? The work is for the world, and despises limitations; it is for humanity, and hates the selfish heart! Humble in the presence of its stupendous task, it begs the best of brain to think and carry out, and that the treasures of the earth, the sea, the air, shall generous tribute pay, withholding not the meanest offering.

Again I say, my friends and brothers, welcome and godspeed! May Heaven outstretch her bounteous hands to bless your lives of sacrifice and toil. We part to-day, each for his separate field of labor, full of common duties. Lonely though our lines may fall, diverging at each step, yet will our aspirations make us always kin and bind us close together. There lies in waiting, and in easy reach, a competency and a reputation. To gain them you bravely bend forward; move toward much grave responsibilities, and they will come. Remember each, I beg of you, to meet them—a doctor schooled in science, and a man.

THE CLASS VALEDICTORY ADDRESS OF UNIVERSITY OF LOUISVILLE, MEDICAL DEPARTMENT, SESSION OF 1895-96.

BY WM. HENRY COLEMAN, A. B., M. D., OF WEST VIRGINIA.

This day is full of significance to us. Our probationary life is being culminated, the foundation is complete, and the superstructure of life's great edifice now begins in the process of erection. And, as in the history of every nation, as in the history of every government, as in the life of every individual, so with you, my fellow classmates, there is a day which marks a transitional period in your life. Such is this day to you. What a mighty transformation in your life, your thought, and your ambitions! To-day the sweet strains of college days fade away into the distance like a mighty dream, to give way to the onward march of the incipient duties and responsibilities of practical life. You now join the mighty orchestra of the world to produce your several parts in the production of life's great harmony.

The University of Louisville, that ancient institution of such wide repute, to-day grants you the ordinary testimonials of knowledge and of fitness to enter the competition of the world; and hence, with a degree on your brow and a scroll under the arm, you go forth as messengers of health, as enemies to the ravages of disease. With opened arms of faith you now embrace the novelties of the medical world, with a profound concern for the message which the future will deliver to you. What shall that message be? Will the world receive you with cypress or with laurel? Time and the manner of your life only can reveal these things, for the skillful hand of the artist has no power to portray to you the highway leading to a successful career.

The medical profession to-day throws its gates ajar to receive and to honor you. You have chosen to exercise the stupendous energies of the mind with a profession where men are searching for the truth and the facts through the mighty refractions of almost contradictory extremes. In this profession you will harmonize your life with the various pulsations of mankind. You will be intimately bound up with the sorrows of all classes. The physician sees life in its multifarious phases and diversified stages of development. In joy and in sorrow, in youth and in the decline of age, in disease and in the blossom of health, from the heartrending scenes of poverty to the palaces of the avenues, he touches the very secrets of the home and the vital springs

of all human action. He deals with the very germs that originate the stupendous energies which form nations and make histories. All crime and all good must originate in the home. A Wilkes Booth, an Abraham Lincoln, a Washington and a Napoleon, an Ingersoll and a Martin Luther, all begin in the home. Hannibal could thunder at the gates of Rome, Cæsar move the world by his forensic arguments, but who than the physician can better direct the forces originating in the home, to form the destiny of the human race? Who can spend a life of completer service? To every call he is expected to respond, whether by the sick man of the cottage or the sick man of the palace. Time, talent, skill, all are consecrated for the amelioration of the afflictions of man. Not wealth in its glittering beauty nor the stimulus of fame call him to duty. He is the hero without the laurel, the artist without the palm, and the conqueror without the triumph.

But who have been some of the stars that have illuminated the horizon of this profession? Go back to the time of Hippocrates, the Father of Medicine, and look down the ages. I speak of Harvey, and at once the blood courses more quickly through your veins; of Jenner, and disease is stayed in its course; of Koch, and instantly you magnify the germs of disease three thousand times. Among the signers of the Declaration of Independence you will find the name of that great physician, Benjamin Rush. The "Constitutional Liberty" party in Europe was led by Rudolph Virchow, no less renowned as a physician and pathologist. Nay, more; shall we not join to this list the names of a Palmer and Yandell, late of our own institution, of equal renown at home and abroad, characterized by keenest intellects, sound judgment, and original thought. Such are a few of the lights that have shone in the medical world. Down the ages their names will go and continue to shine forth with brighter effulgence. Histories and monuments will hold sacred their memories for their supreme effort to comfort and to elevate the race.

The initiatory step into this profession should result from a careful study of the true motives to a successful career. The motive springs to human action are as multitudinous as the results which follow. The love of wealth, of fame, of notoriety, of high position, of supremacy, are all found inherent in man. Mental energies and moral natures are the daily sacrifices for notoriety and a place in history. But the foulest vagabond may become famous. And do you call him great? "If so, Guiteau will rank in greatness with Garfield, Wilkes

Booth with Abraham Lincoln, and Judas Iscariot with Jesus Christ." The most famous generals of the world have stained their garments with the blood of an innocent race. The mighty Roman empire sat triumphantly mistress of the world at the expense of human blood, human freedom, and the moral status of the people. Nay, who can not become famous and yet be void of the first principles of true greatness! Equally significant among the motives to action is the love of wealth. Gold is a mighty monster. It attracts the great and wins the small. It enables you to travel to sunny climes, where the air is balmy and where the beautiful flowers shed their fragrance on the evening air. Money wins the highest position in the gift of men, and summons the masses to bow in submission at your feet. But all such motives count for naught. Fame, wealth, notoriety, as motives, are the gilded chariot wheels on the highway to disaster. Yield to them and they hypnotize your noblest energies. There is but one true motive, that which is found in service to man.

A life of service is a life of success. Since the advent of the Great Physician, two thousand years ago, flashing through the universe goes the Spirit of Service and of the universal Brotherhood of Man. The click at the telegraph station registers the news of a Russian famine. You respond by a cargo of grain. You read of a Johnstown flood, and I see the nation respond to the universal Spirit of Service. Hospitals, insane asylums, and infirmaries, not to be found on the pages of Oriental history, are to-day the living testimony to the transformation of the world. Churches, academies, and universities are the pride of your heart, the symbols of service. Nay, serve your own generation, and future generations will serve you.

Significant among the forces that shall govern your success and give you equal rank with the men who have preceded you, is to be found in unremitting toil. Labor was made divine in the Garden of Eden. Constant application to a task with unflagging zeal is the winning feature of the day. Labor is chief among the laws of progress; moral and physical growth are its dependencies, intellectual development its offspring. Newton will testify that genius is the synonym of patient labor. Genius lies dormant in midnight darkness unless set on fire by sparks of constant toil. It tones the system and puts the better

Wendell Holmes asks, "What have we to do with time but to fill it with labor?" What victory was ever won without a battle, what rest ever attained without labor? Turn to history and question our greatest men. Plato rewrote the first page of the Republic thirteen times. A German physician learned to repeat all of the Iliad in Latin and Greek while visiting the sick. Question orators like Clay and Calhoun, musical composers as Handel or Rossini, Newton the mathematician, and Socrates the philosopher; all unite to testify that patient labor is the very essence of genius, and marches at the head of all progress and development.

If motion is the law of the universe, idleness is the offspring of the King of Hades. Idleness is responsible for countless failures and wrecks in human life. Better a man should die from overwork than die from absolute rust. Armies have been kept busy to prevent them "from being devoured by the worm of indolence." Listen to Colton: "Ennui has made more gamblers than avarice, more drunkards than thirst, and more suicides than despair." Leisure is a brilliant and attractive garment to look at, but a dangerous one to wear. It lies as a heavy weight upon the mind and robs the intellect of that nourishment necessary to high and unique development. It deposits a mighty rust upon the soul, and bids you sacrifice nature's highest endowments to the gratification of the baser senses. It thwarts our highest aims, overpowers our lofty ambitions, and intoxicates the purest motives.

"Eschew the idle vein,
Flee, flee from doing naught,
For never was there idle brain
But bred an idle thought."

Paramount among the conditions to success we place the study of law. Law is everywhere conspicuous. Laws of nature, of morals, of State. The ultimate high destiny of the race can be attained only by conforming to fixed and immutable laws. The vegetable kingdom produces after its kind, the oak from the acorn, the cedar and the palm tree after their kind. When we enter the animal world the law of antagonism and death is distinctly visible. In every division of the animal kingdom known to scientists there exist a number of animals charmed with a passion for dominating and being dominated.

being is not falling a victim to some other. Again, I see a man standing on a scaffold as he frescoes these walls; he violates the laws of gravitation, and falls a mangled, bleeding mass to the ground. Join hands with the anarchist to violate the criminal laws of this State, and you may test the gallows at Frankfort. The "mariner in sight of the threatening rocks of Scylla and the devouring whirlpools of Charybdis" is dashed to pieces by the warring elements of nature because he has violated the laws of knowledge. The "Patriarch Moses, in sight of the Promised Land, flowing with milk and honey," is denied an entrance because he disregards the laws of his God. All men are coming more and more to believe universally with theologians, that transgression of the unchangeable laws and commands of the Divine Artificer of the Universe will invite eternal destruction of the soul. Nay, all nature rises up to testify that law and order govern the progress of the world. And the study of these rules is of prime importance to the young man of this day.

Among the elements that are requisite to produce a successful career, individual character stands supreme. Character is the crown of human life. The history of the ages teaches that truth enshrined in the bosom of perfect manhood shines forth through the wars and conflicts of every age. True character is the one element in creation supremely permanent. It knows no recluse, and is the monopoly of no individual. Through the wars of the ages character stands as the one symbol of greatness in the individual and in the nation. That nation which originates great ideas, great sentiments, and trains great characters is the one to which the world points with the finger of pride and delights to call great. You call America great. She has founded her government with the strictest regard for the principles of justice and equality. Here it is that liberty of action and freedom of conscience may reign supreme. Recall, if you will, the palmy days of Greece and look down the ages. You see mighty kings enthroned, empires teeming with prosperity, individuals able to purchase the world with their gold, provinces by their apparent prosperity arresting the attention of the world—all things at the zenith of success. But a period later you view the same territory, and a different scene greets the eye. Humanity is stained by crimson blood; individuals choking under poverty; kings weeping over the funeral pile of a decaying

shines over the known world, now barbarism guards the throne. Nay, what means this alternation between life and death? To-day a nation stands at the pinnacle of success, to-morrow she lies beneath the tread of advancing victors. Is it not all due to the violation of the laws of justice, of freedom, and of character, which are the foundation of all permanent greatness. If extent of territory is greatness, then Russia is the greatest nation in Europe. If greatness consists in multitudes, China is the greatest nation in the world. If it consists in population and territory combined, then the Rome of Regulus was less exalted than the Rome of Nero, and the Greece of Leonidas was less glorious than the Greece of Alexander. But, not so. True greatness, both national and individual, is the fruit of perfect manhood.

To the Trustees and Members of the Faculty: What higher compliment can we pay you than to say that we are going forth from the shelter of that ancient institution, the University of Louisville, which is itself a memorial of the ferment of hard sense and sound judgment. The mental discipline and technical knowledge received under your instruction is fully comparable to that acquired at any similar institution, if the student be possessed of moderate ability and a disposition to be found in unremitting toil. But we leave you to-day, sirs, and at a time, too, when great revolutions are undergoing in this medical science. Questions once baffling your skill are now settled in a moment by the use of the test-tube and the microscope. The vocal cords and the trachea are viewed by the instruments of Czermack. The wave of the pulse and heart are registered by the apparatus of Marey. The haunting dread of septicemia is put to flight in this antiseptic era. The visions and fables of one age are becoming the facts and practices of a succeeding age. Every branch of the science of medicine is developing with a rapidity that commands the admiration of the world.

Without encroaching upon the field of him who is to follow me with a masterly tribute to the memory of your deceased brother, permit me to say that a great man is absent. Prof. Palmer has yielded to the inexorable law of our being. His spirit is wafted away to sunnier climes, and we can do naught but bow in submission to the wisdom of Providence. His great voice, for twenty-five years reverberating among this people, is now hushed in eternal silence. Students are no longer thrilled by the outpourings of his profound intellect and peculiar ability for didactic instruction. He is absent forever. But, sir, great

men do not die. They live in the record of their actions; they live in the respect and gratitude of mankind; and he has lived long enough to connect himself for all time with the records of this institution. He is remembered to-day, and long it will be before the last word shall have been spoken of this eminent man and teacher.

Finally, my fellow classmates, we must say farewell. For three years we have been bound together by the closest bonds of intimacy. Our hopes and aspirations have been one. The throbbing impulse of our natures has gone out in mutual sympathy one for the other, while our ambitions burn for the same triumphs. With a common interest we have shared alike the *sub sultus tendinum* of the junior year, and the *hyperpyrexia* of the Green Room. But the battle is fought and the victory won. Farewell, then, to college days and their happy associations!

To the good people of this southern metropolis, Louisville, whose homes have been open for our reception and our comfort, and whose desire for our ultimate success has been an open feature in their demeanor toward us, to them shall we not attribute some measure of the success of the hour?

But, boys, we must separate to-day. We linger here but a moment amid the pleasantries of flowers, of music, and of friends, to begin the conquest for new victories, to enter the borders of an untried land which is spotted all over with disappointments. What joys, what sorrows; what wealth, what poverty; what labor, what repose; what failures, what victories, will be delivered to you in the message of the future? Sir, you may be delegated to some remote niche in the temple of fame; Croesus may frown upon you and history fail to recognize you, yet 't is yours to stand like adamant in this mighty warfare. Let the dignity and the perfect manhood, interwoven like a golden thread into the very fibers of your natures, win for you the highest regard of the people, while you shall inspire the utmost confidence by legitimately demonstrating your true value and worth. Then will this profession of medicine, to which you now apply for admission, delight to recognize you, and the serene voices of the world will unite in one grand oratorio to promulgate your success.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ."

Vol. 21.

SATURDAY, APRIL 4, 1896.

No. 7.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of **THE AMERICAN PRACTITIONER AND NEWS**, Louisville, Ky.

Subscriptions and advertisements received, specimen copies and bound volumes for sale by the undersigned, to whom remittances may be sent by postal money order, bank check, or registered letter. Address

JOHN P. MORTON & COMPANY, Louisville, Ky.

THE UNIVERSITY OF LOUISVILLE.

The commencement exercises of the Medical Department of the University of Louisville took place in Macauley's Theater on the afternoon of March 30th, ult.

Prayer was offered by the Rev. E. L. Powell, pastor of the First Christian Church. Upon recommendation of the Dean, the degree of Doctor of Medicine was conferred upon fifty-nine candidates by the Hon. T. L. Burnett, Vice-President of the Board of Trustees.

The class valedictory was delivered by William Henry Coleman, A.B., M.D., of West Virginia, the alumni address by C. M. Rosser, M. D., of Terrell, Texas, and the faculty valedictory by Professor H. A. Cottell, M. D.

More than common, but sad, interest was given the occasion by the fact that it was the memorial of the late Professor E. R. Palmer, who lost his life by accident on the 5th of July, 1895. The addresses appear elsewhere in this issue.

The following is the list of graduates:

Arthur, B. L., Tex.

Bird, Jesse, Tex.

Barnett, A. M., Ky.

Bates, S. W., Ky.

Botdorf, J. C., Ind.

Bowers, H. C., *M. D.*, Ky.

Brock, G. S., *M. D.*, Ky.

Bryan, Chas., *M. D.*, Ky.

Clary, O. C., Ohio.

Compton, B. T., Ky.

Campbell, F. C., Ky.

Clark, J. J., Ky.

Coleman, W. H., W. Va.

Cooper, A. J., *M. D.*, Mont.

Davidson, H., Ky.

Duncan, E., Tex.	Latimer, N. J., <i>M. D.</i> , Ark.	Roop, J. W., Va.
Day, H. C., Vt.	Lowry, A. C., Ohio.	Riley, E. T., Ky.
Davidson, J. H., Mo.	Milem, J. A., Va.	Rudy, G. A., Ky.
Finley, J. L., Ind.	Muir, S. C., Ky.	Skaggs, P. T., W. Va.
Goings, H. W., Va.	McClure, Chas., Ky.	Shreck, W. A., Neb.
Helfrich, H. J., Ind.	McFarlane, A. H., Utah.	Simpson, E. E., La.
Herrington, I. B., <i>M. D.</i> , O.	McPhetridge, J. D., <i>M. D.</i> , Tenn.	Sturdevant, M. G., Ind.
Jones, A. F., Tex.	Palmer, E. R., Jr., Ky.	Seay, E. L., Tex.
Jones, A. L., Tenn.	Palmer, J. B., Ky.	Schmadel, J. W., Ind.
Johanbocke, F. H., Ky.	Pruett, G. W., Ky.	Timmons, S. P., Tex.
Kimbley, H., Ky.	Paxton, J. H., Tex.	Timmons, J. D., Ky.
Lederman, I., Ky.	Palmer, C. A., N. J.	Williamson, H. F., Ky.
Lindenberger, I., Ky.	Rothgeb, H. D., Ill.	Weber, J., Ky.
Lieser, F. D., <i>M. D.</i> , Ky.	Robertson, G. A., Iowa.	Winstandley, W. C., Ind.
Leonardi, B. C., Fla.	Roberts, J. T., Ky.	

There was the usual accompaniment of music, flowers, and good wishes. The audience was a crowd. The young doctors depart with the *Alma Mater's* love and benediction.

Notwithstanding the fact that the school was passing through the ordeal of change from the old to the new system of teaching, involving a higher preliminary scholarship on the part of matriculates, an extension of the college term, and the addition of a year to the under-graduates' term of study, the number of students was above the average of former years, and the number of graduates as great as could have been expected under the circumstances.

The graded system of teaching has been found to work to the entire satisfaction of the students and the professors. The laboratory work has been of unusual interest, and the clinics have afforded full and brilliant exhibitions of the diagnostician's skill and the surgeon's dexterity.

The surgical clinic, for instance, gave the students an opportunity to see two suprapubic cystotomies, a resection of the knee joint, trephining, a nephrectomy, numerous amputations, and the reduction of many fractures and dislocations, with tenotomies, and the application of various appliances for the correction of deformities, while the *Roentgen rays* were successfully applied to the location of a bullet in the wrist, which was removed by the professor in the presence of the class.

In the gynecological and obstetrical clinic there were done one vaginal hysterectomy for cancer of the womb, and three celiotomies for tumors of various kinds. The Kelly method of suturing by means of silver wire was exhibited with full success, and the patients were cared for in the infirmary of the college dispensary, where they made, without exception, uninterrupted recoveries.

Three deliveries in obstetrics were also accomplished in the presence of the class. One was labor at full term. The other two were induced, one because of atresia of the vagina, and the other because of gestative insanity. The women in both instances were delivered of viable fetuses, whose chances for survival were further enhanced by means of the incubator. Two of the women were delivered with forceps.

The work in the medical clinic was dispatched in the usual masterful manner which has made this department one of the most popular features of the school, while the clinics in the specialties of ophthalmology, neurology, and genito-urinary diseases were thronged with patients who served to exhibit and illustrate all the important features of these departments.

Altogether, the college closes a year of work successful and satisfactory in all respects, and brilliant in surgical features beyond any thing in its past record.

Notes and Queries.

RESULTS OF HYSTERECTOMY FOR CARCINOMA OF THE UTERUS.—Russell (Johns Hopkins Hosp. Bulletin) has analyzed the subsequent course of forty-seven cases of hysterectomy for malignant uterine disease performed in Kelly's clinic and private practice. Of these operations forty were by the vaginal, four by the combined, and three by the abdominal method. Of the patients five, or ten per cent, died from the operation, and sixteen, or thirty-four per cent, died with recurrence; twenty-one or forty-four per cent, were still living, and one died from heart lesion eighteen months after the operation. The other four cases were not heard from. Of the twenty-one still living, sixteen had passed the limit of two years ordinarily assigned for the duration of the untreated disease, and were in good health. In the sixteen fatal cases recurrence and death took place within eighteen months. Of those which recovered, one had a local recurrence in the scar three months after the operation; this was excised, and up to the time of writing she had been in perfect health for two years and a half. Two others developed carcinoma of the breast, and one metastases in the cervical and axillary glands. Nine of the cases suffered from adeno-carcinoma of the body of the uterus; of these seven were still living (one to five years after the operation), one died from the operation, and the other from recurrence, the operation not having been complete. No recurrence took place in any

other case. Of the thirty-eight hysterectomies for carcinoma of the cervix fourteen patients were still living; in three of these the operation was done more than four, and in four more than three, years ago. Russell finds that by far the greatest tendency to recurrence is during the first eighteen months after operation, but that the patient is not free from this danger even after four years; he also emphasises the fact that the probability of recurrence is much higher with carcinoma of the cervix than of the body. The results, on the whole, convince him that the operation of hysterectomy is not only valuable as a palliative measure in malignant disease of the uterus, but is in a distinct proportion of cases an actual means of radical cure.—*British Medical Journal*.

LEAD GOUT AND THE INFLUENCE OF LEAD INTOXICATION UPON URIC-ACID EXCRETION.—As a result of a careful clinical study and a survey of the literature of the subject, Luethje (*Zeitschrift für klinische Medizin*) maintains that there can be no doubt that an intimate relation exists between lead intoxication and gout. It is probable that by itself, without the aid of other etiologic influence, lead is capable of causing gout. Intoxication with lead has no influence upon the excretion of uric acid; so that the gout-inducing activity of lead is not due to retention and accumulation of uric acid. The presence of uric acid in the blood of those suffering with lead intoxication is to be attributed to an excessive production of this acid. How this is brought about can not at present be explained. In all probability lead is capable of inducing "gouty necrosis." In order to cause gout the intoxication with lead must have been of long standing. The clinical course of lead gout differs in several particulars from that of the ordinary form of gout: (a) The first attack usually occurs at a relatively early period in life. (b) There is a tendency for many joints to be involved in rapid succession. (c) Often joints are involved that usually escape in the ordinary form. (d) The tendency to the formation of tophi and of deformities is more than ordinarily pronounced. The prognosis is always dubious. Examination of the urine of a dog poisoned with lead showed that xanthin bodies comprised about half of the nitrogen of the alloxur bodies. After feeding with thymus gland xanthin basis could be found in the blood, but no uric acid.—*Medical News*.

OPERATION ON A TUBAL CYST: STERILITY CURED.—Gersuny (*Centralbl. f. Gynäk.*, No. 2, 1896,) removed a tumor of the left ovary from a woman, aged twenty-five, April 10, 1895. It proved to be a tubo-ovarian cyst. The

part of its substance attached to the broad ligament) into the hole made in the tube, and the edges of the hole were sewn to the ovary by interrupted sutures. Then the abdominal wound was closed. The patient menstruated at the beginning of June, July, and August, but no more after August. Gersuny saw her on November 25th. She was in good health; the breasts were rather tense, the cicatrix of the abdominal wound dark purple in color, and the uterus spherical and as big as an orange. The fundus rose above the symphysis, and the cervix was very short. This experimental operation seems to prove that a tube after it has become sacculated can resume its functions if its tissues have not been destroyed by disease.—*British Medical Journal*.

EXPERIMENTAL ADDISON'S DISEASE.—At a recent meeting of the Société de Biologie, Boinet (*Semaine médicale*) related the results of a series of experiments directed to the artificial production in animals of Addison's disease. It was found that lesions of the suprarenal capsules were followed by an accumulation of black pigment in the blood and an infiltration therewith of a large number of organs and tissues. From one hundred and nine rats both suprarenal glands were removed; the glands of twenty were ligated, and in a third series the glands were cauterized by means of tincture of iodine, silver nitrate, ferric chloride or zinc chloride, or irritated with pus from inflammatory or tuberculous lesions. The black pigment, which was like that found beneath the skin and the mucous membrane and in several organs from two fatal cases of Addison's disease, was found in the blood in notable quantity in half of the cases, in smaller quantity in a quarter, and not at all in the remainder. In a number of animals whose suprarenal capsules had been irritated or removed several months previously, there was also an infiltration of the pigment in the subcutaneous cellular tissues, in the lumbar and mesenteric glands, in the peritoneum, in the mesentery, under the fibrous capsule, and in a cyst of the kidneys, in a cyst of the liver, in the superficial portion of the spleen, in the lung, in the prevertebral cellular tissue, at the surface of the brain, in the bony marrow, and in the muscles. Sometimes marked muscular paresis, with gradual asthenia, completed the analogy with Addison's disease. Finally, injection of an extract prepared from the muscles of such rats induced fatally toxic results in other rats, especially if the suprarenal glands were previously irritated or removed.—*Medical News*.

THE TRENDELENBURG POSITION IN PROLAPSE OF THE FUNIS.—There is an interesting letter by Dr. R. Abrahams in the American Journal of Obstetrics on this subject. He relates a case in which his attention was accidentally called to the value of this position in the treatment of prolapse of the cord. It was a case in which the vertex presented. On rupturing the membranes a very large quantity of liquor amnii escaped, and a portion of the umbilical cord, estimated to be ten inches in length, was carried down

by the gush of the waters into the vagina. The os was fully dilated, and the best plan seemed to him to be to deliver the woman either by forceps or version as quickly as possible. The patient's surroundings were of the poorest possible description, and the bed on which she was lying was "a wide long board with four poles as feet to rest on." While he was trying to get the patient in position for operating the foot of the bed gave way. This necessitated the raising and holding up of the foot of the bed some six feet from the ground while the supports of the bed were being repaired. On lowering the bed after this had been at last accomplished he examined the patient, and was surprised to find that no part of the cord was to be felt in the vagina, and that the head was fully engaged. Delivery was effected quite naturally without any assistance. Dr. Abrahams ascribes the change in the condition of things to the extreme Trendelenburg position caused by raising the foot of the bed to the height above mentioned; and this appears most probably to be the true explanation of the sudden recession of the cord. He considers the Trendelenburg position much superior to the genu-pectoral position formerly recommended for these cases, as being more comfortable for the patient, but, on the other hand, it has the disadvantage of causing difficulty in breathing. Still, as the position may only have to be maintained for a short time, as in Dr. Abraham's case, treatment of prolapse of the funis by the Trendelenburg position seems to deserve a trial.—*The Lancet*.

SCRUMPOX.—"Scrumbox" is the English school-boy's name for a severe form of impetigo occurring among the forwards of Rugby foot-ball teams. The "scrum" or "scrimmage" with its close commingling of heads, arms, and legs in indiscriminate confusion undoubtedly offers ideally favorable conditions for the communication of this disease, which is usually confined to the head and face, and often results in severe suppurative dermatitis with glandular enlargement.

DR. W. M. L. COPLIN, Professor of Pathology at Vanderbilt University, Nashville, Tenn., has been elected to the chair of pathology and bacteriology in the Jefferson Medical College of Philadelphia, where until last year he occupied the position of adjunct professor of hygiene and demonstrator of pathology. The new pathological laboratory of the Jefferson will be completed by the opening of the next term, when Dr. Coplin will assume charge of this department.—*Medical News*.

ANTHRAX IN LONDON.—It is stated that on February 12th there were five cases of anthrax under treatment at Guy's Hospital in London. The disease had been contracted in all the cases at the same factory from handling goat skins. The treatment consisted in the main of excision of the primary lesion.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXI.

LOUISVILLE, KY., APRIL 18, 1896.

No. 8.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

ACUTE ARTICULAR RHEUMATISM.*

BY JOHN G. CECIL, M. D.

Professor of Principles and Practice of Medicine, Louisville Medical College.

Acute rheumatism is like the evil a man does, it is not to be feared so much for its immediate danger as it is for the effects that live after it. While, indeed, it occasions much suffering, when uncomplicated it is seldom fatal. Ancient history is not called for in this presence, yet I pause long enough to say that within twenty years the whole subject of treatment has been completely revolutionized by the introduction of salicin and its compounds. Formerly, it was "six weeks in bed" of unremitting pain; now we approach the case with confidence inborn of experience in our ability to relieve the anxious sufferer. A glance at the familiar picture will suffice as to the symptomatology. The position productive of the least discomfort has been studied with scrupulous care, the affected members rest upon the downiest pillows, the coverlet is propped over the tender joints, the face is flushed and hot, the expression pained and anxious, the skin bathed with a profuse sour-smelling sweat, the eyes glisten with unwonted brightness, the mind is clear and active. The approach of the nearest friend to the bedside or ministrations at the hands of the gentlest nurse is met with a groan of anguish. The inability to change the posture without agonizing pain, the drenching sweats, the prostration and utter helplessness combine to make the picture one of abject misery.

* Read before the Louisville Medico-Chirurgical Society, February 7, 1896. For discussion see p. 302.

As bearing upon certain parts of this subject, to which attention will be asked in this paper, it will be well to consider for a moment the exact seat of rheumatism. It is now generally conceded that the malady has its seat chiefly in the fibrous and serous tissues. The poison exercises its influence on organs and textures in which these tissues predominate. There are fifteen common seats of rheumatic inflammation, the hips, knees, ankles, shoulders, elbows, wrists, hands, and heart, the large joints and the organ whose action knows no rest. In the joints the capsules, ligaments, and tendons with their sheaths and the synovial membranes suffer. In the heart the white fibrous structures of the rings and valves and the serous investing membrane are the parts especially involved. While tissues of these kinds appear to be requisite to the development of rheumatism, all tissues of the same kind are not equally apt to suffer. The periosteum, the dura mater, the frame-work of the liver, spleen, kidneys, and uterus are of the same fibrous material and far greater in quantity, yet they do not suffer as do the large joints. The synovial membranes of the small joints, the pluræ, peritoneum, and the arachnoid are serous membranes, still they are practically exempt. "The structure of all white fibrous tissue is very much alike, but in function it varies very much. The chief functions are to support entire organs, for example, the spleen; to bind together and give support to their constituent parts, as instanced in the function of ordinary connective tissue, and to control and regulate movement, as in the joints. One of the chief functions of serous membrane is to facilitate movement."

Nowhere in the body is the demand for freedom of movement greater than in the large joints and the heart. The deduction from all this is that the rheumatic poison has a predilection for the fibrous and serous tissues of those organs that are habitually engaged in controlling and regulating movement, and that rheumatism is essentially a disease of the motor apparatus. But though the effect of the poison on the tissues mentioned produces the most prominent symptoms, viz., pain and swelling of the joints, they are not the only ones that give evidence of disturbance. The excessive formation of lactic acid in the blood and the profuse acid sweats are almost as necessary to a diagnosis of rheumatism as the swollen joints. The muscles are a necessary part of the motor apparatus. Lactic acid is a normal product of metabolism of muscle; excessive formation of that acid indicates increased metabolism of muscle. There is always an excess of lactic acid in acute rheuma-

tism and never in any other disease; the inference is that the excess of lactic acid is due to the action of the rheumatic poison on muscular tissue.

The nature of the change resulting from the action of the rheumatic poison has been a matter of some difference of opinion. One point, however, upon which all agree, is that it is an inflammation. The point about which opinions differ is as to the nature of the inflammation. The special characteristics of acute rheumatic inflammation which indicate something of its nature are: Its tendency to hereditary transmission and to attack those of particular age, and the liability to repeated attacks in the same individual; the invasion of several joints simultaneously or in succession, and the proneness to attack the membranes of the heart; the fact that it rarely terminates in suppuration, and that it yields promptly to proper constitutional treatment. These features give unmistakable evidence of its internal and constitutional origin. While cold and dampness are not regarded as the cause, they undoubtedly determine the attack in very many instances.

The Theories of Rheumatism. That particular *materies morbi* or the specific bacterium which is the cause of acute rheumatism has not yet been declared to the satisfaction of all. Many theories, both interesting and beautiful, have been advanced; the most important are the lactic acid, the neurotic, and the miasmatic. The first of these appears to be the most satisfactory, and has attracted the largest number of supporters. Prof. MacLagan, of London, in a recent monograph, has attacked this theory with much vigor, and in the same article has committed himself to a belief in the miasmatic theory. His argument against the former and in favor of the latter are so cogent that I make no apology for offering an abstract of them.

Profuse acid sweats and hyperacidity of the urine are characteristics of acute rheumatism. This excess of acidity led to the definite suggestion by Prout and others that the *materies morbi* was lactic acid and that the rheumatic symptoms resulted from the accumulation of this acid in the blood. With the acceptance of this naturally followed the rational line of treatment by alkalies. The presence of this acid in the system may be due to increased formation, to defective elimination, or to a combination of these two agencies. Lactic acid is produced during the metabolic changes which take place in muscle. Exercise increases the quantity, but exercise also favors increased elimination; the compensatory balance is thus maintained. Chilling the surface will

check the elimination, resulting in accumulation in excess, and this in turn produces the symptoms of acute rheumatism. This is the lactic-acid theory, and the arguments offered in support of it are:

(1) "Acute rheumatism is accompanied by excess of lactic acid in the system, and such excess is noted only in connection with it." The accuracy of this statement is conceded; the point at issue is, does its presence in excess in the system give rise to the phenomena of acute rheumatism, or is it, like pain and fever, merely one of the phenomena of the disease? According to this theory the acid causes the rheumatism, and the main support of this theory is that there is always an excess of the lactic acid during the course of acute rheumatism. Were this true, the rheumatic symptoms should persist as long as the acid existed in adequate excess in the system, and should decline when it ceased to do so, and not till then. Remedies which neutralize the acid should cure the rheumatism. The facts, however, are that the alkalies may be given so as to saturate the system and render the urine alkaline without either curing the disease or even shortening it in its duration and course. The salicyl compounds cure acute rheumatism quickly, but they neither neutralize nor get rid of lactic acid. The acid sweats may continue several days after pain, swelling, and fever have subsided, which indicates the continued existence and excretion of the acid that is formed during the continuance of the disease. The conclusion is that salicin cures the disease by its action on the rheumatic poison and not by neutralizing lactic acid, and that the acid is a result, not a cause, of the morbid process which constitutes the disease.

(2) The second argument is that "the injection of lactic acid into the systems of lower animals has been said to be followed by inflammatory changes similar to those which occur in acute rheumatism." This was deduced from the experiments of Sir B. W. Richardson. After injecting lactic acid into the peritoneal cavities of dogs, he observed after death a redness of the endocardium. This would indicate that endocarditis, not rheumatism, was the malady induced. While endocarditis is a frequent, excess of lactic acid in acute rheumatism is a constant factor. The conclusion was greater than the premises would warrant. A better reason for rejecting this teaching was demonstrated by Reyber, who showed that the endocardial signs which Richardson attributed to the action of lactic acid are found in all dogs, no matter how they are killed. So the redness of portions of the endocardium which Richardson regarded as pathological was shown by Reyber to be normal.

(3) The last point in support of this theory is that "the administration of lactic acid to man has been followed by symptoms of acute rheumatism." This, if unanswered, would appear to be conclusive, and the strongest point yet offered. Since lactic acid has been exhibited in the treatment of diabetes in several instances, its administration has been followed by symptoms indistinguishable from those of rheumatism. Unless this can be explained the argument refuting the lactic-acid theory is imperfect.

One of the most remarkable was the case of a patient suffering from diabetes and phthisis, reported by Dr. B. Foster, in which there occurred six well-marked arthritic attacks. These attacks came on when lactic acid was taken, and ceased when it was discontinued. Now lactic acid is an excitory product, and, like all such products, when retained exercises two distinct actions: First, a stimulant action on the organ by which they are normally eliminated; and second, a disturbing action on the tissues which supply the materials from which they are formed. Lactic acid is eliminated chiefly by the skin and the lungs, and it is formed during action and retrograde metabolism of the tissues of the motor apparatus. The result of excess in the blood is increased action of the skin, this failing, functional disturbance of the motor apparatus. When given to the phthisical diabetic, it was given to a man whose oxidizing power in the lungs was impaired, and the dry branny state of his skin was highly unfavorable to elimination by one of the common channels. Consequently, it was retained in the system and caused disturbance of the nutrition of the textures of whose metabolism it is a product. The symptoms resulting from the retention of the lactic acid in the blood are therefore likely to be those of disturbance of the tissues of the motor apparatus, and this is what happened in the case cited. The excess of lactic acid in the blood undoubtedly causes some of the phenomena of acute rheumatism, but it does not, as the theory asserts, produce all the phenomena. One of the most constant of these phenomena is the excess of lactic acid, but lactic acid can not be said to be the cause of its own excess.

Another objection to this theory is that it involves the belief that during a short exposure there is formed in the system of a rheumatic enough lactic acid, not only to produce an attack of acute rheumatism but also to keep up the symptoms for weeks with the patient protected from cold, and at the same time to supply the excess, which is being eliminated freely during the many weeks' continuance of the disease.

The amount necessary to do this should be sufficient to produce the most acute inflammation in all the tissues in the body liable to rheumatic inflammation, certainly causing the disease to be much more formidable and fatal than it really is. The joints should all be affected at the same time and not in succession, and the heart involved in every case. Free elimination by the skin, which is common in all cases, should be followed by relief of pain and other symptoms, but such is not the case.

The clinical histories of acute rheumatism and malaria afford some very striking analogies. This has led to the miasmatic theory of rheumatism. Some of the points in common between the two diseases are: Both are notably diseases of temperate climates, most frequently occurring in the spring and autumn months, most common in damp, low-lying localities, neither have a fixed period of duration, neither are communicable from the sick to the healthy. Both are of irregular type with variations in this course. Profuse perspirations characterize both, in both the urine is loaded with urates. One attack of malarial fever appears to render the system more liable to its recurrence; the same is true of rheumatic fever. The course of malaria is promptly arrested by large doses of the cinchona compounds; the course of rheumatism is as speedily cut short by large doses of the salicyl compounds. In order to make the analogy more manifest it will be advisable to examine each separately.

It is a well-known fact that in a short stay, even a single night, in a malarial region a sufficient amount of the malarial poison may be absorbed into the system to give rise to a fever which, if unchecked, may last for weeks. It is not probable that enough of the poison is introduced at once during the brief exposure to prolong the attack through a period of weeks. Such an amount would undoubtedly prove speedily fatal much oftener than it really does. The researches of Lavern, Golgi, and others have shown that the blood is the habitat of the *plasmodium malarie*, that in the blood only does it find a soil favorable to growth and multiplication. They have also demonstrated that the malarial poison is abundantly found in the blood during the pyrexia, but not during the apyrexia. The rational explanation of this

nidus is destroyed, and consequently for the development of the successive paroxysms.

The especial features of acute rheumatism are as follows: In rheumatism the joint affection is usually preceded by evidence of constitutional disturbance, but the fever does not reach its height until the articular inflammation is fully established. When once the disease is fully established the local inflammation and the constitutional disturbance go hand in hand, they rise and fall *pari passu*.

It is important to note how the poison of rheumatism acts upon serous and fibrous tissue to induce inflammation. The claim of the miasmatic theory is that it acts as an organism and owes its action on these tissues to its propagation in them, and on them its morbid effects are chiefly manifested. In this respect rheumatism is somewhat analogous to the eruptive fevers, the joint and heart affections being the local lesion. The local inflammation is limited in the joints almost entirely to such fibrous and serous textures as are associated with active movement, and in the heart to the left side. The age of liability to acute rheumatism, from fifteen to fifty, is that period of greatest functional activity of the tissues whose inflammation constitutes the special lesion of the disease.

In the matter of hereditary transmission it is not claimed that the miasmatic poison is transmitted from father to son any more than it would be claimed that the *plasmodium malarie* was so transmitted, but only the diathesis, the soil favorable to its propagation and action. The presence of lactic acid has been shown to be the normal product of retrograde metabolism of muscular tissue. The profuse perspirations of acute rheumatism are due, not to an effort of nature to eliminate the rheumatic poison, but to the stimulant action of the excess of lactic acid on the skin. They are not regarded as either especially prejudicial or beneficial, but only as one of the symptoms. "The shifting character of the joint affection is one of the striking peculiarities of a rheumatic attack. It is impossible to explain it on any theory which recognizes only the existence of a poison equally distributed through the blood, acting like an ordinary medicinal or poisonous agency, and acting, therefore, equally and continuously so long as it exists in adequate quantity. The action of such a poison would be continuous and persistent, not shifting and variable. The miasmatic theory, which regards the rheumatic poison as a parasitic organism requiring for its development and action a second factor or nidus which is localized in fibrous

and serous tissues, which exists in varying amount in different parts of the tissues, and which, like the nidus of ordinary malarial fevers, may be exhausted and renewed again, explains this peculiarity of the local lesion of acute rheumatism. Its exhaustion in one joint may coincide in point of time with its renewal in another." When metastasis occurs to the heart, this organ may be placed in the same category as a joint, for the tissue affected in one is similar to that affected in the other.

It is to be regretted that the investigations hitherto made have not shown the constancy of any micro-organism in the disease. Several observers have described micrococci in the blood of rheumatic patients, but none of them can be said to be specific. The lack of definite information in this particular does not of necessity preclude a belief that it is a disease of miasmatic origin. The especial bacterium of many other diseases now recognized as specific has not been described, nevertheless they are universally classed as specific diseases.

Until a theory more plausible and supported by a more convincing array of facts is offered, I am prepared to pin my faith to the miasmatic theory of acute rheumatism. Both time and your patience, which I regret, forbid consideration of other theories and features of this interesting disease, especially the neurotic theory and the cardiac affections.

LOUISVILLE, KY.

EMPLOYMENT OF TANNIGEN IN THE DIARRHEA OF CHILDREN.*

BY PROF. ESCHERICH.

From the Pediatric Clinic of the University of Graz.

The small number of really efficient remedies which are at our disposal for the treatment of the so frequent diarrheas of children has been recently augmented by the introduction of tannigen, a drug discovered by Prof. H. Meyer, of the University of Marburg.† This remedy has been carefully tested by physicians both in Germany and other countries (F. Muller, Kunkler, Drews, Winands, Chester, Moncorvo), and has been warmly recommended, and on the ground of my own experience I would direct the attention of my colleagues in

Tannigen is a diacetyl combination, of tannic acid, having the formula $C_{14}H_8(CH_3CO)_2O_9$. In the double benzol radical of tannic acid $C_{14}H_{10}O_9$, the acetic acid radical CH_3CO has taken the place of two hydrogen atoms. It appears as a yellowish-gray, odorless, and tasteless, slightly hygroscopic powder, which is insoluble in cold water and dilute acids, but is dissolved by alkalies, by solutions of phosphates and carbonates, as well as by cold alcohol. In milk which contains these salts in abundance a small portion of the powder is dissolved, while the main portion forms an insoluble precipitate. The solution has a yellowish color, a faint astringent taste, which, however, can be scarcely appreciated on addition of milk, and gives with oxysalts of iron (liqu. ferri. sesquichlor.) the characteristic dark blue color of tannin. On contact with alkalies, therefore, the tannin is set free, and the solution now gives the chemical and pharmacological reactions of the latter, that is, it precipitates lime and albumin and exerts an energetic astringent effect and its property of arresting secretions.

It is to these properties that tannigen owes its therapeutic applicability. In the preparation of the remedy Meyer was led by the idea of rendering available the marked local effects which tannic acid exerts upon the mucous membranes for the treatment of catarrhal conditions of the intestinal tract. The disadvantages of employing tannic acid itself are its disagreeable taste, the fact that its effect is exhausted on the mouth and stomach, and that it is absorbed in the upper portions of the intestinal canal, so that it does not reach the lower part of the intestine which is most frequently affected. The employment of enemata of tannic acid, by which these disadvantages might be obviated, is attended with serious objections and inconveniences. The possibility of exerting a strictly localized and sufficient action upon the lower part of the intestine is only afforded by the use of remedies which are decomposed in the intestinal canal, as in the case of salol first prepared by Nencki. Tannigen, which passes through the mouth and stomach as an insoluble powder, belongs to this class of remedies. It is dissolved in the intestinal canal at all places where an alkaline reaction prevails and exerts its astringent effect. Of course, the question as to where and under what conditions an alkaline reaction occurs in the intestinal canal of infants, especially of those nourished on milk, must remain undecided. The reaction of the intestinal wall is alkaline; the chyle, however, as I have shown* in breast-fed infants exhibits an

*Escherich: *The Intestinal Bacteria of Infants*, 1886, page 157.

acid reaction along the entire intestinal canal, in infants artificially nourished, in its greater portion. As is well known this acid reaction, notwithstanding the secretion of alkaline intestinal juices, is kept up by the decomposition products of sugar of milk which result from the action of certain kinds of bacteria.

It would be an error, however, to suppose that this acid reaction, even when demonstrable in the stools, has existed at all points of the intestinal tract. This will depend upon the proportions between the quantities of chyle and intestinal juices, and under all circumstances the portions of chyle immediately in contact with the intestinal walls will present a small peripheral zone, in which in consequence of the constant flow of alkaline secretion a neutral and alkaline reaction is preserved. While, therefore, the tannigen passing with the acid gastric contents into the intestine is excreted, as Meyer has shown, in part unchanged in the feces, a moderate astringent effect upon the intestinal wall is nevertheless to be expected even if the secretion does not exceed the normal limit.

The conditions are different if, in consequence of an irritation acting upon the mucous membrane, an increased secretion of mucus or an intestinal transudation takes place into the intestinal lumen. There is then more likely to be an alkaline reaction of the intestinal contents, as in these conditions food can be administered only in small quantities, and for therapeutic reasons the sugars so liable to fermentation are dispensed with. The tannigen administered with the food will be decomposed under all circumstances, and will exert its effect in a truly elective manner upon those places where the most profuse secretion prevails and which are therefore the most markedly affected by the disease. The action of tannin will, of course, differ greatly according to the seat and nature of the hypersecretion. I regard it as absolutely contra-indicated in severe inflammatory affections of the intestine and the associated transudation of serum into the gut. Even the exudation of thin, serous fluid, such as occurs in acute irritation of the upper intestinal canal is only slightly influenced. On the other hand, the elements concerned in the secretion of mucus, especially the glands of Lieberkühn, situated in the lower portion of the intestine react in an almost specific manner upon tannigen. The quantity of mucus admixed with the feces, and especially that adhering to them externally, diminishes at once after use of tannigen, and frequently returns after discontinuance of the remedy. By arresting the abnormal secretion of

mucus the existing irritation of the membrane together with the actual cause of the disease is removed, the nitrogenous losses of the body lessened, the increased peristalsis diminished, and thereby the absorption of nutritious material and water in the large intestine facilitated.

The effect of the remedy is not yet, however, exhausted. Although up to now no exact experiments are at hand, it must be conceded that tannic acid possesses certain properties of arresting the development of bacteria. A similar effect is produced by tannigen which, when decomposed, gives off two molecules of free acid which neutralize the excess of alkalis. Finally, we would call attention to the well-known property of tannic acid of forming insoluble and hence innocuous combinations with alkaloids as well as numerous bacterial poisons (toxalbumins). It is possible that by the administration of tannigen with the milk not only are abnormal processes of fermentation diminished, but a portion of the toxins developed in the intestines neutralized. For similar reasons Cantani* has advised the use of hot tannin enemata in Asiatic cholera.

All these valuable properties combine to produce the excellent results which have been reported from the employment of tannigen in subacute and chronic intestinal catarrh of children. I am able to confirm these by personal experiments continued for more than a year. The characteristic feature of catarrhal stools is the increase of the quantity of mucus, while in other respects (fluid character, increased number, presence of undigested food particles,) they resemble those of diarrhea. If the mucus comes from the upper portion of the intestine it is admixed with the food residue in form of sago-like, glassy kernels. If, however, the lower portions of the intestinal canal are the seat of the catarrh, the mucus forms a colorless or yellowish-green coating over the stools, which sometimes appear as if covered with mucilage. The last-mentioned evacuations alternate with those in which purely mucous masses resembling frog's spawn admixed with blood and pus are discharged. More frequent than the pure types are the mixed forms which develop from the latter and, owing to the long duration of the disease, the accompanying emaciation of the patients, and their obstinacy toward all remedies, form a veritable *crux medicorum*.

I must confess that in these cases I had never observed a prompt effect from the administration of the customary remedies, as tannate of quinine, aqua calcis, tincture of rhatany, lignum campechianum, and

* *L'Enteroclise tannica calda*, etc., Naples, 1884.

this is explicable when one compares the enormous extent of surface of the diseased mucosa with the small doses of the drugs employed. I have therefore always given the preference to astringents mixed with the food, and have derived excellent results from their use. I had never, however, witnessed so prompt and reliable an action in these cases as I obtained from the administration of tannigen. Even as early as the second day after commencing its administration, there was a marked diminution in the quantity of fluid and mucus in the stools; the solid constituents predominated, and in favorable cases after a few days the evacuations had assumed a normal character. The administration of the drug must then be discontinued, as otherwise constipation may result. Of course, so rapid and favorable a course can be expected only in those subacute cases which of themselves tend to recovery, and in connection with the use of dietetic measures. Yet in the chronic cases, at least at the commencement of treatment, the decrease of mucus and dry character of the stools is always to be noted. It will then depend upon the extent of the changes of the mucous membrane and the general condition of the child whether this improvement will be transient or the initial stage of recovery. In any event the remedy, in connection with an appropriate dietary, must be given for a long time in order to obtain permanent results, and I coincide in the advice of Kunkler and Drews to continue the drug for some time after the removal of the catarrhal symptoms.

To obtain positive results tannigen must be prescribed in large doses, 0.25 gm. to infant up to one and one half years, and 0.5 gm. to older children, four to six times daily. Contrary to the statements of some authors, I usually direct the powder to be given mixed with the food. In this form it is readily taken in the necessary amounts even by suspicious children, and owing to its admixture with the acid chyme it preserves its effect until it reaches the lower part of the intestine which is most frequently attacked by catarrh. Injurious after-effects, disturbance of the appetite or digestion, I have never noted. The chloride-of-iron reaction was never demonstrable in the urine. After use of tannigen the feces not infrequently showed spots of dark color extending from the surface inward. I would also call attention to the fact that on addition of iodine solution microscopic examination reveals a diffuse light red color, which is attributable to the use of the remedy and may be employed as a micro-chemical test.

The results in acute intestinal catarrh with watery projectile stools

as well as at the commencement of follicular enteritis appeared to me much less favorable, so that here I retained the customary remedies, calomel and bismuth preparations. As soon as the acute signs of irritation are over, however, and the stools assume the catarrhal character, tannigen is again indicated, and after enteritis I have observed remarkably rapid improvement after its use. Simple dyspepsia as well as diseases limited to the stomach are of course a contra-indication. As regards its utility in cholera sufficient data are not at hand. On the other hand, the diarrheas following measles as well as the diarrhea occurring in intestinal tuberculosis are favorably, although only temporarily, influenced by the remedy.

It is probable that the above-mentioned conditions do not exhaust the number of indications for the use of tannigen. Perhaps the possibility of administering large quantities of tannic acid conveniently and without disturbance of digestion will lead to its again being resorted to as a styptic and astringent for internal organs by way of the blood channels, though discarded at the present day. It is, moreover, possible that the disinfectant properties of tannic acid and its ability to neutralize toxins may be more effectively utilized in the future in changes of the intestinal contents. Yet even at present we can already say that the new remedy is assured a permanent position in the list of active astringents, and that no physician who has become familiar with its effect will care to dispense with it in the treatment of intestinal catarrh of children.

PROTONUCLEIN.*

BY F. M. GREENE, M. D.

In a former paper, read before this Society, I spoke of the great importance of the white corpuscles of the blood in the animal economy when either defense or repair are called for.

Protonuclein is defined as "a granular substance, resulting from the action of the leucocyte upon the proteids of the circulation." The albuminous proteids enter the cell by endosmotic action, and under the influence of the nucleins are immediately converted into nuclein or protonuclein proper.

* Read before the Lexington and Fayette County Medical Society.

To this substance Lionel S. Beale gave the name "formed material or bioplasm," and Prof. Huxley, regarding it as the physical basis of life, protoplasm or protonuclein. The leucocyte possesses certain characteristics *sui generis* and not observable in the red corpuscle. Its power of independent motion enables it to roam about at will and penetrate the walls of the capillaries and blood-vessels (diapedesis).

Under the microscope it is differentiated from the red in being colorless and in possessing a cell wall, inclosing its nucleus and nucleoli, and a cell substance in which the latter float, and which is in constant vibratory motion.

By bursting of the mother cell its contents are being constantly delivered to the various organs and tissues from which each appropriates its own nutriment.

The above are some of the characteristics which have been observed in the wonderful leucocyte under the microscope. From this definition of protonuclein it is to be observed: That the various extracts obtained from the glands of healthy animals, although not nuclein proper, are rich in proteids which may be readily converted into protonuclein. The subject of isopathy is exciting considerable interest in the profession at the present time, and it will be remembered that several years ago, W. A. Hammond called attention to musciline, cerebrine, cardiene, ovarine, testine, etc., and for which he claimed great therapeutic power in the cure of certain affections.

About the same time an eminent physiologist, Brown-Séquard, announced the discovery of the "elixir of life," which was obtained from the testicles of the ram. These various extracts, made doubtless by chemical process, or the so-called vegetable nucleins made by a similar process from yeast, must at any rate be inferior to the protonuclein obtained directly from the glands of healthy animals.

By experience we have learned that pepsin and pancreatine are valuable in the treatment of gastric and intestinal dyspepsia and indigestion. They supply the deficiency when the secretions are deranged or abnormal, and until proper remedies are directed to their cure.

The products of certain glands of healthy animals have gained considerable reputation in the cure of certain diseases. Those of the thymus and thyroid glands have been found valuable in the treatment of goitre and myxedema, and of the former cures have been effected by the use of the thyroid extract. As these are ductless glands it might be supposed that their disease, or even absence from the body,

would make but little difference, but, as a matter of fact, result in goitre or cretinism.

Prof. Hun has recorded some interesting experiments with this gland in the lower animals. When removed from its usual place and transplanted to the abdominal cavity, the animal resumed its ordinary condition of health as observed before its removal. The secretions from these glands doubtless enter the blood through the absorbent system and are essential to the maintenance of perfect health.

Bone marrow has gained considerable reputation in the various forms of anemia, progressive, pernicious anemia, and in Hodgkins' disease. It has been claimed that the red marrow obtained from the smaller bones is more effective in the treatment of anemia than the preparations of either iron or arsenic.

The subject of hematogenesis is one of great interest, and it has not been decided what are really the hematopoietic organs of the body. The red corpuscles are distinct from the white and have no cell membrane and rarely possess nuclei. They belong to a common tissue and yet have distinct and separate duties, the one conveying oxygen to the tissues and the other material for repair and defense.

That the smaller leucocytes originate in the absorbent glands seems highly probable, for any irritation of these glands results in increase of the number of leucocytes. Virchow claimed that the larger lymphocytes originate in the spleen, and yet he defines leucocytosis as "an increase of leucocytes from irritation of the lymphatic glands." The red greatly outnumber the white and yet are correlative with them, since derangement or decrease of the latter are soon followed by diminution and impoverishment of the former.

Next we come to the most interesting series of animal extracts obtained from the blood serum of animals which have been submitted to the attenuated virus of malignant germs of certain diseases.

Serum therapy has awakened a widespread interest in the treatment of diphtheria, and it is claimed by able clinicians in the hospitals of Europe and this country that from its careful use the mortality from this dread disease has been reduced more than one half. The tetanus antitoxin obtained in a similar manner has been used successfully in the treatment of tetanus in the lower animals, and in a recent number of the *Therapeutic Review* of the Pasteur Institute, N. Y., C. F. Zimmerman, M. D., reports a case of the successful treatment of tetanus in the human subject. It has been found that the so-called antitoxines

obtained in this manner are both prophylactic and curative of the above-named affections.

There is some difficulty in determining the *modus operandi* of these animal extracts. The antitoxines are supposed in some way to counteract the effects of toxin formed in the blood by virulent germs. Several theories have been advanced to explain this. Pasteur first called attention to the fact that bacilli after a short time disappeared from his culture flasks, and also that they were frequently not found in the blood or secretions of patients laboring under disease shortly after invasion. This he supposed was because they had exhausted the material upon which they subsisted. Chevaux believed that they were poisoned by their own excretions, and that immunity from a second attack existed as long as they remained in the system. Next we have the theory of tolerance, by which the system gradually becomes accustomed to poisons when administered in minimum doses in the beginning and increased until it will tolerate doses that would have proved fatal had they been given at first. Again, that the toxin and antitoxin are isomeric bodies, and in the presence of each other one assimilates the other, or by chemical process both are changed and rendered inert.

Next we have the theory of phagocytosis, as taught by Metschnikoff, in which the leucocytes destroy or remove from the system pathogenic germs. According to this theory the leucocytes show positive attractive force (*chemiotaxis*) for the proteids constituting the body of bacilli and assimilate or destroy them, and in this manner a cure is effected.

Although this most ingenious theory is demonstrated by seeing under the microscope the germs enter the leucocyte and disappear as if by magic, it does not account for the immunity which one attack of disease confers upon its subject.

The most plausible theory of all is that the leucocyte itself manufactures in its laboratory a nuclein, which is both germicidal and protective against the formation of toxin in the blood. According to this theory, the reason why certain persons resist disease is that the powers of life are in full vigor and the leucocytes furnish a proper nuclein. It is the loss of this power in the leucocyte which will explain the various cachexias to which the human system is subject. This will account in a certain degree for both heredity and immunity. The leucocyte inherits its strength or weakness from the leucocytes of previous generations. The so-called antitoxin generated in the blood

serum by attenuated cultures stimulates by degrees the leucocyte to the formation of proper nuclein when they have not this power or have lost it. The nuclein so obtained is imparted from the healthy to the diseased animal. The milk of the immune mother contains a nuclein which renders at any rate the nursing infant immune while it receives its nourishment from her. It is the observation of many physicians that during the period of lactation the infant is not susceptible to the exanthemata to which they at once become susceptible after weaning. Racial immunity is well known, and the lower animals as a rule are immune to most of the diseases which attack the human subject.

We know that persons in perfect health will resist disease as a rule, and that when the system becomes enervated or from improper alimentation is broken down, the leucocytes are unable to resist the inroads of bacteria and disease results. As long as the white corpuscles of the blood continue to manufacture proper nuclein the system will resist disease. It is difficult to comprehend how diseases of microbic origin are hereditary, unless we believe that the ovum or spermatazoön transmits the microbe or its spores to the new being which results from their union. It is more easy to understand that the inheritance of a definite disease is only the inheritance of a morbid predisposition, and it only requires an external cause to bring about the development of actual disease. The sources of contagion are so numerous and hidden as often to escape the observation of the physician. The impress imparted to the new being that is to be is faithfully reflected in both the maternal and paternal leucocytes which form the new being. Inherited predisposition is often manifest in nervous diseases, and here environment and education doubtless perform an important part. The therapy of disease is reduced to the simple problem of furnishing to the leucocytes proper material, the proteids from which they derive their supply.

The distinguished Graves wished inscribed upon his tomb that "he fed fevers," and little did he realize that he was only reinforcing myriads of leucocytes engaged in deadly conflict with pathogenic germs.

A question of great importance is how far the protonuclein obtained, not by chemical process, but directly from the glands of healthy animals, may be made available in the cure of disease and the building up of wasted tissue.

It is from the albumen of fresh eggs that the nuclein is obtained.

its supply by endosmosis, and protonuclein obtained from the various glands of healthy animals doubtless furnishes these proteids ready formed. My experience with the remedy in anemia has at any rate been promising, and in chronic indolent ulceration I have found that its local application disposes to healthy granulation and rapid cicatrization. In such cases I have given it internally at the same time. Both as a tissue builder and to enable the leucocyte to fight successfully its battle with disease-producing germs it is indicated in all diseases of microbic origin.

LEXINGTON, KY.

CITY WATER SUPPLY AND FILTRATION.

BY W. P. WHITE, M. D.

Health Officer, City of Louisville.

The supply of an abundant quantity of pure water, best fitted for drinking and other dietetic uses, to cities and towns has become one of the most important topics which can engage public attention. The habits incident to an advancing civilization involve continually the consumption of a larger amount of water per head of the population. The procurement, besides a sufficient supply and distribution, of proper wholesomeness in the water is a very serious problem with many of our larger cities. The connection of purity of the water used for domestic purposes with the condition of the public health has been proved most conclusively; and it is found that the ravages of epidemic diseases in any district are widespread and fatal very nearly in the proportion of the impurity of the water, especially in organic contamination, supplied for the use of the inhabitants.

The condition and quality of the water supply and its influence on the public health being irrefutable, sanitary rules, based on the most careful study, should aim to secure a quality of water which will satisfy the requirements of the most advanced hygienic regulations for potable water.

All natural water is more or less contaminated by foreign matters. The impurities present in natural waters are mechanical, gaseous, dissolved mineral and organic impurities; organic suspended impurities consisting of animal and vegetable organisms, either living or dead, of animal remains and refuse, and of vegetable matter. Of soluble organic

impurities the vegetable matters are not usually of a very deleterious character, but it is the animal matters which are most dangerous, and are frequently the means of spreading contagious diseases. A polluted water supply is one of the greatest of disease breeders, containing a large number of bacteria, many of which are disease-producing germs. It is the universal opinion of all investigators that typhoid fever is a water-carried disease. While typhoid fever is the most important one in its disastrous results, there can be no doubt that other diseases owe their existence directly to the use of polluted water, and that the use of such water is detrimental to the general health.

Rain water, collected at a distance from inhabited places and upon insoluble surfaces of rock or sand, is the purest kind of natural water. Yet even common rain water is usually yellowish on account of the fine dust, smoke, and other impurities which it gathers in falling through the air. But after it has been strained through the earth it is sweet, clear, and bright, because the beds of sand and gravel through which it trickles are natural filters which take out all colors and impurities.

The common and most eligible sources of public water supply are rivers and lakes. These are by far the most available, and usually supply all requirements excepting that of hygiene; and only with methods devised for eliminating from their waters all organic matter and bacteria inimical to health can they be wholly satisfactory.

Chemical and biological examinations demonstrate that river water is at all times, and occasionally grossly, polluted. Every one recognizes the dangers lurking in water from a large river carrying the sewage and drainage from many thousand square miles of settled and built-up territory, and made the channel for the waste and filth of every city and town on its banks and on the banks of its tributaries. Since the adoption and extended use of water-closets the waste-water of towns has become more offensive than in the old days of privies and cesspools it used to be, and therefore the consequent increasing pollution of the rivers. And it can not be claimed that the germs productive of typhoid fever and other diseases communicable by ingestion are removed or destroyed by the self-purification of these streams.

The Ohio River water unpurified can scarcely be classed among safely potable waters. Before it reaches Louisville the Ohio River receives the sewage and surface drainage from many cities and towns, aggregating a population of probably two millions of people; carrying, with the sewage of these two millions of people and the urban drainage

from the cities and towns on its banks, the germs of all infectious diseases directly or indirectly coming into it from this vast territory and population. The result of this contamination is forcibly illustrated by the vital statistics compiled from official reports of health departments. For the three principal cities taking their water supply from the Ohio River or its tributaries the death-rates from typhoid fever are reported to be for the calendar year 1895:

Pittsburgh 77 per 100,000 population ;

Cincinnati, 36 per 100,000 population ;

Louisville, 77 per 100,000 population.

On the other hand, in New York, Boston, and Brooklyn, which depend upon impounded water gathered in large reservoirs and carried in storage for many months, the typhoid-fever death-rates are, by the last reports, shown to be:

New York, 17 per 100,000 population ;

Boston, 28 per 100,000 population ;

Brooklyn, 16 per 100,000 population.

And in Vienna and Munich, where the water is obtained from springs in mountainous districts, the death-rate from typhoid is reduced to 7.0 and 7.1 respectively per 100,000 population.

Where a city's water supply is available only from sources within reach of sewage and drainage contamination, the best methods in vogue for the purification of the water should be adopted. The water, before distribution to the people for domestic uses, must be subjected to such treatment as to make it comply with the requirements of the highest practical standards for purity.

Sedimentation and filtration may not furnish chemically and bacterially pure water, but viewed from a practical standpoint such water will be so far advanced in purity and in the arrest of disease germs that no one can object to its use for all purposes. The purification of polluted river water obtained by filtration combined with proper subsidence has accomplished the most satisfactory results. The introduction of filters at Hamburg is credited with reducing the death-rate from typhoid fever from 28 to 6 per 100,000 population. After the filters of the London water-works were operated to meet the requirements of a bacterial standard, the typhoid rates fell from nearly 90 deaths per 100,000 of population for the decade 1861-70 to 24 for the decade 1871-80, 19 for the decade 1881-90, and finally to 15 per 100,000 of the population for the period 1890-94. In a recent discourse by Dr. Frankland

before the Royal Institution of London, referring to the uniformly excellent filtration that had been reached in the water supply of London since filtration was made compulsory in 1856, he said, "that the effect of sand filtration, as carried out by the London water companies, upon the living matter contained in raw water was simply astounding. A single drop of unfiltered Thames water sometimes contained nearly 3,000 separate living organisms, but after filtration only two or three would be found, and sometimes the filtered water was absolutely sterile."

Mr. Hazen, late chemist of the Massachusetts State Board of Health, states that "in parts of Germany, where the water is of exceptional purity and under governmental control, typhoid fever has ceased nearly to exist."

The change of source from the two-mile to the four-mile intake crib of the Chicago water supply reduced the typhoid-fever death-rate from 104 in 1892 to 42 and 31 in 1893 and 1894, respectively, per 100,000 population. In fact it is established that the spread of diseases such as cholera and typhoid through the agency of drinking-water is occasioned by living organisms of extreme minuteness; and vital statistics furnish conclusive proof that high quality of water supply goes hand in hand with low typhoid-fever rates and a general betterment of the public health.

The Louisville Water Company is at present making tests of the various systems of filtration, and is exhibiting a commendable desire, by persistent and intelligent investigations, to ascertain the best method of purification, with the purpose to construct a filtration plant that will supply our people with a quality of water which, as far as practicable, shall equal the water of any large city in the country. When this is done the wells and pumps, of which we have 653—open or wood pumps numbering 532 and tube wells numbering 121—should be condemned and filled as fast as analysis shows them to be impure, and the use of hydrant water delivered through the public mains substituted. The changes in our domestic habits which involved the construction of sewers for conducting away the refuse from every house have led to the more or less contamination of wells and pumps by infiltration from the sewers, receiving considerable of the sewage and all surface drainage. It is certain that money, labor, and study can not be spent to better advantage than in meeting the demand for a public water supply which certainly shall not be the cause of disease and death in our households.

LOUISVILLE.

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, February 7, 1896, Dr. W. L. Rodman, President, in the chair.

Exhibition of Pathological Specimens. Dr. W. L. Rodman: This specimen, a very perfect sac of a hernia, was removed in a radical cure operation by the Bassini method a week ago yesterday in my clinic. Upon the same patient at the same time I did an amputation of the penis. The hernia incision was dressed with iodoform collodion and we got primary union. The patient is doing well, and is the third I have had in the last three weeks.

The second specimen is a keloid that evidently originated in a vaccination scar in a white girl eighteen years of age. I would like to ask the gentlemen present if they have ever operated upon a case that failed to return promptly. It is a very common disease in the negroes of this country, and always occurs in connection with a scar.

Dr. A. M. Vance: I have removed many keloids, and I have never seen a case of what I believed to be true keloid that did not return. I have operated upon burn cicatrices that did not return.

Dr. Rodman: It occurred to me that if I could immediately skin-graft the wound I might avoid a return. On account of the fact that keloid nearly always returns at the site of a stitch-hole I treated the wound as an open one. It is in a perfectly aseptic condition now, and I will skin-graft it later on.

The essay was read by Dr. John. G. Cecil; subject, Acute Articular Rheumatism. [See page 281.]

Discussion. Dr. Wm. Bailey: I shall find it a little difficult to discuss this subject in the short time allotted to me. The symptomatology I shall not allude to. Coming to the etiology, I have for many years been inclined to the lactic-acid theory. We are not very clear as to the physiology of metabolism and elimination of the products of change or waste. Strongly in favor to my mind of the lactic-acid theory is the admitted fact that the symptoms of acute rheumatism have been developed by administration of lactic acid. There is a question whether

the peculiar acid sweats of rheumatism, the sweat when it first appears, is so distinctly acid as we would infer. It is claimed that much of this acid condition is developed by retention upon the skin and changes taking place on the surface. It is claimed that if the skin is thoroughly and constantly cleansed we do not get the acid sweats.

I do not see much in favor of the theory over and above what has been claimed for the lactic-acid theory, and until better advised I shall hold to that view.

As we come to understand the nature of metabolic changes we may find that there is something besides lactic acid which is not eliminated. It is not always the case that there has been excessive muscular action before an attack of rheumatism; it may be that it is the retention of what is produced in ordinary activity.

I do not believe that rheumatism is confined to the most active period of life. The child before it comes to the age at which rheumatism occurs is a more active animal than ever afterward, and up to ten years of age will use more muscular power in proportion than in after life; yet rheumatism is not very common before the age of ten. From fifteen to thirty-five rheumatism is more frequently observed on account of the more frequent exposure to conditions that excite it. I do not believe there is a rheumatic diathesis, of whatever that may consist, or that exposure has much to do with bringing on an attack. In the polar regions they say that rheumatism is not observed.

I am opposed to the statement that the salicylates cure rheumatism; it is questionable in my mind whether they do this or not. Some of the phenomena are controlled almost magically by the salicylates, yet these cases are in bed as long as they were formerly without any treatment at all. While we relieve all the symptoms of rheumatism by the salicylates, I believe that treatment by the alkalies was in its results equal to the salicylates; it would be well often, after controlling the acute symptoms, to put the patient upon the citrate or bicarbonate of potassium, following up by the iodide. I do not believe that we prevent heart complications by the salicylates as we did formerly by the alkaline treatment.

There is one question that I am willing to admit, that possibly patients treated with the salicylates are not as well cared for as formerly, when, instead of being made comfortable and relieved of pain, they were forced to remain in bed. It is my observation that we do not shorten the duration of acute rheumatism by any known treatment.

Dr. J. A. Larrabee : It is with considerable sensitiveness that I arise to speak on this subject. Theoretically I know nothing about it; practically I am well acquainted with it. I wish to say in regard to the different theories of rheumatism that some of them are plausible; the least plausible is the miasmatic, and the lactic-acid theory is the most plausible. But is there not something behind the lactic acid? We have in other conditions symptoms of joint pain which very closely resemble rheumatism. The question is, how is the lactic acid formed? Is it due to the action of the bacterium lactis in the intestinal canal, or is it a muscular metabolism? In the explanation of the excessive formation of lactic acid we have the true etiology of rheumatism. It is a self-limited disease, and will get well in six weeks if let alone. My experience has been like that of Dr. Bailey: by the use of salicylates we relieve the symptoms but do not cure the disease, and the old treatment by alkalies still stands. Cardiac complications are less frequent under the alkaline than any other treatment. My experience does not agree with that of Dr. Bailey in regard to rheumatism in children under ten years of age. It is not seen oftener because it is not looked for. The waywardness of complaint in children under five years of age is such that it is liable to direct the attention in other directions. The pains which are attributed to rapidity of growth are all rheumatic. You will find, if you will observe closely, very frequent cases of rheumatism in children under five years of age.

There is no doubt in my mind that there is a distinct hereditary tendency to rheumatism. My grandfather was gouty and rheumatic; my father was distinctly rheumatic; two of my grandchildren have had distinct inflammatory rheumatism.

Chorea following rheumatism if due to embolism would be preceded by, first, endocarditis, second, embolism and paralysis. We all know that chorea is readily curable; it would not be so if the embolic theory were true.

Dr. J. A. Ouchterlony : I have listened with a great deal of interest both to the paper and the discussion following it. I noticed in reading on the subject that there is one theory that has not been mentioned except incidentally, and not in the same sense that the writers have spoken of it, namely, the embolic theory. It is very interesting, and more so because it is entirely opposed to all that rheumatism presents, as we see it. According to the embolic theory there is ulcerative endocarditis; where this comes from the originator and supporter of the theory does

not mention. French and German writers speak of an infectious theory. They take the ground not that rheumatism presents a condition analogous to malarial fevers, but that it is analogous to the other infectious diseases. That micro-organisms have been found in the blood we all know, and the originator of this theory claims that while the exact micro-organism that causes the disease has not been found, the probability is that in that direction we will find the true explanation of all the phenomena of the disease.

I myself do not believe in the lactic-acid theory, and think that it is pretty well given up by the majority of pathologists on the continent of Europe. One reason that appears not satisfactory to me is that in all the experiments upon the lower animals articular inflammation has never been produced. I do not think it is an established fact that there is an excess of lactic acid in all cases of rheumatism.

A recent French writer makes a very striking remark on the subject of rheumatism. He says it licks the articulations but bites the heart. The idea seems to be that it is especially upon the heart that it makes its most severe and permanent impression. I am sure I have seen cases where the cardiac lesion preceded the articular affection; I am sure that cases do not occur in which there is no articular affection at all, but the disease is limited to the pericardium or endocardium. But it will not do to consider all cases of endocarditis as due to rheumatism. In children it often follows upon an attack of measles or scarlet fever; and in many cases of cardiac disease in children supposed to be due to rheumatism careful inquiry would reveal a history of an attack of measles or of scarlet fever which may have been the starting point of the cardiac affection.

Dr. J. B. Marvin: Dr. Cecil has given us a very good resumé of MacLagan's article in the *Twentieth Century Practice*. He is the principal exponent of the salicyl treatment and also of the miasmatic theory. I confess that I know nothing about rheumatism. I am familiar with the literature of course; but all the arguments that can be advanced in favor of the lactic-acid theory or the miasmatic theory can be met by equally strong objections. There are as many points against either view as there are in favor of it. The latest view is that it is a specific disease due to a micro-organism or a plasmodium, but there seems to be some splitting of hairs as to whether they act directly or indirectly. Rheumatism acts like an acute infection; it runs its course; we may mitigate pain and fever, but we do not cure the disease. Mac-

lagan claims that the opponents of his theory have not been just to him; that they give five or ten grains of salicylic acid every three or four hours; he advocates thirty or forty grains every three or four hours. I have never seen an individual who could stand it.

Dr. A. M. Cartledge: I am glad to hear the discussion rheumatism has brought out, but am sorry that more was not said of its etiology and pathology. I think every gentleman is willing to say, after the excellent paper of Dr. Cecil, that every one has a perfect right to advocate a theory of the cause of rheumatism. There are a great many points of interest in the pathology and natural history of the disease. It certainly pursues the course of a self-limited disease and is characterized by symptoms such as are present in infectious diseases generally. There seems to exist a remarkable antagonism between what is the cause of rheumatism and the pyogenic micro-organisms. There was an important point brought out by Dr. Cecil, that rheumatism affects movable joints. I once had a young man come to me with inflammation of the wrist joint, probably rheumatic, as the subsequent course and involvement of the other hand showed. I put the joint in a fixed dressing and was struck by the results obtained by fixation. I look upon it as one of the most valuable means of relieving the pain.

I believe that rheumatism is a bacterial infection and that the site of infection is the upper part of the alimentary canal, and that the salicylates are useful by lessening the development of the micro-organism and consequently the absorption of its products. So we also notice a marked benefit is always produced by the administration of purgatives which is accounted for in the same way.

Several of the gentlemen in discussing the treatment of acute rheumatism by the salicylates said that they did not arrest the rheumatism; that it lasts as long as it formerly did. I do not think this should go out as the opinion of such a society as this. I do not believe that physicians give as much salicylates as they should. I do not think there is any thing more thoroughly proven, that if sufficiently large doses be given the salicylates will cure acute rheumatism. It does not require six weeks to get these patients well. In regard to the throat cases, I agree fully with Dr. Cottell and Dr. Howard, that these are nearly all due to infection by the pyogenic cocci, and in these cases the pain is nearly always muscular.

Dr. Bailey: I think it was advocated that the salicylates should be given in all cases of acute rheumatism, and the higher the temperature

the more favorable the result. As far as dosage is concerned I have given 20 grs. every two hours, and have gotten relief most remarkable in 48 hours; yet in spite of this you will find these patients ill at the end of the time set down by Dr. Cecil.

Dr. F. C. Wilson: I have seen many cases in which the effect of salicylate of sodium was almost miraculous. Many cases I can recall where in 24 hours all the symptoms disappeared never to return. I have been in the habit of giving salicylate of sodium in ten-grain doses every hour, generally prescribing twelve doses. Rheumatism is a capricious disease; and cases are sometimes met with that resist even the largest doses of salicylate of sodium and go uninfluenced by every thing that is done and finally get well.

Dr. Cecil (closing the discussion): There are a great many phases of the subject of rheumatism which are of great interest to me. I have never regarded suppurative tonsillitis as of rheumatic origin. I believe, however, that more slight throat affections occur with greater frequency in individuals with a history of rheumatism than in any other class of people. I do not think there can be a reasonable doubt of a hereditary tendency in rheumatism as there is in gout. I do not believe the rheumatic poison itself is transmitted, but that a soil favorable to the development of that poison is transmissible. I asked for discussion of the effects of salicylates upon these special forms of eye and ear diseases with an object in view. I do not think the most ardent advocates of the miasmatic theory of rheumatism claim any good effects worth mentioning from salicylates upon the chronic forms of rheumatism. The comparison between the treatment of rheumatism with salicyl compounds and malaria with quinine can be carried out in this way. We saturate the patient with quinine, but he does not get well at once but must be subsequently treated with tonics in order to perfect the cure. The same is true of rheumatism. We do not claim that rheumatism is cured directly. Many of the failures to get an effect from the salicylates are due to the fact that they are not pushed as vigorously as they should be and given in the way in which they can be best borne by a rebellious stomach. Maclagan claims that to get a good effect we must give it boldly in full doses first, and gradually decrease it, not allowing the patient to get out of bed. If allowed to get up the tendency to recurrence is very much greater than if they are kept in bed and the decreasing doses continued. Another point is the claim that salicin and the salicylates have no effect upon rheumatic heart troubles.

This is explained in a very ingenious way by this author: and that is that we seldom observe the effects of rheumatism upon the heart as quickly as upon a movable joint, consequently we lose time. Further, the rheumatic affection is in the fibrous structure of the valve and must have some time to develop before the free edge of the valve will show it. In a rheumatic joint we can get also the beneficial effect of rest, and we can see the good effect of treatment upon the joint, but not upon the heart. The heart is an organ as much involved in rheumatism as the joints, but it is an organ we can not put at rest. MacLagan claims that salicin will slow the action of the heart, and in slowing it will accomplish something in the way of giving it rest.

JOHN L. HOWARD, M. D., *Secretary.*

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Section on Ophthalmology.

A stated meeting of the Section on Ophthalmology was held in the Lower Hall of the College of Physicians on the 21st of January, 1896, Dr. Wm. F. Norris, Chairman, presiding. Present: Drs. Friebis, Hansell, Harlan, Norris, Oliver, Randall, Ring, Risley, de Schweinitz, Thompson, Zentmayer, and Zimmerman, Fellows of the College; with Drs. Adams, Brick, Bromley, Cassel, Chance, Krauss, Lamon, McGuigan, Posey, Shoemaker, Stevens, Sweet, Veasey, and Zeigler as guests.

Dr. George Friebis presented a case of partial rupture of the eyeball followed by recovery, with restoration of vision to almost full acuity, occurring in a young man eighteen years old. The right eyeball sustained a large break through its corneo-scleral junction, extending beyond the equator, by the entrance of a piece of heated iron. The wound was sutured and vision gradually rose to almost normal. When seen five years later vision still remained the same.

Dr. George E. Schweinitz made a brief communication upon restoration of the upper lid border by Hotz's method, and showed two cases upon whom he had recently performed the operation.

Dr. Howard F. Hansell showed a two-year-old child of Russian parentage who exhibited a well-marked clinical picture of retinal glioma in the left eye. It now could be readily perceived by ordinary

this instance there was a family history of an older child who was similarly affected and who soon died after enucleation had been refused the attending ophthalmic surgeon. Dr. William Thompson stated that it is a very interesting fact that the present case had not as yet presented any signs of increase of intraocular tension, thus rendering the diagnosis not absolutely certain.

Dr. George C. Harlan described a new operation intended for the preparation of an orbit for the insertion of an artificial eye. The procedure consisted in an attempt to form an artificial sulcus by the passage of a stout lead wire through the base of a number of cicatricial bands and adhesions which connected the lids with the bottom of the cavity. The wire was passed around the bottom of the cavity, its ends were twisted together at the external canthus, and it was to be allowed to remain in place until the tissue lining the passage that it formed had completely cicatrized. It was then to be removed by incising the cicatricial tissue in front of it, and an artificial eye was to be inserted, the margins of which should rest in the position that the wire had occupied. The patient was shown several weeks after the insertion of the wire, which had occasioned scarcely any irritation, and the final result will be reported at some future meeting.

Dr. Charles A. Oliver exhibited a patient from whom five years previously he removed a piece of steel from the vitreous chamber by means of an electro-magnet. The operation, which consisted in passing a straight electrode, carrying a current of thirty-five cell strength, through an incision made through the sclera between the insertion of the external rectus and the inferior rectus muscles, resulted in the extraction of a small piece of steel, which was followed by a rapid cessation of all inflammatory symptoms. The patient was lost sight of until about a month before the meeting of the Section. When shown at the meeting the eye was perfectly quiet.

Dr. S. Lewis Zeigler showed a case in which a piece of steel in the vitreous was also removed by an electro-magnet. The case presented almost identical symptoms as the one reported by Dr. Oliver; and although the same length of time had not elapsed since the operation, the eye had also remained perfectly quiet and comfortable.

Dr. de Schweinitz gave the brief notes of a case of laceration of the left eyeball caused by a piece of steel which had been broken from a

account of extravasated blood no foreign body could be detected, the patient was etherized and the flat point of a Hirschberg electro-magnet (the current being obtained from a three-celled cautery battery) was introduced three times within the eye and moved in all directions, but was withdrawn without securing the foreign body. Under careful treatment the eyeball had assumed its proper shape and regained almost its normal tension in three days' time. In two weeks vision had risen to $\frac{3}{4}$, and the only ophthalmoscopic lesion visible was a large triangular white patch on the temporal side, indicating the point of rupture. Six weeks later vision had fallen to $\frac{1}{16}$, and the entire vitreous was filled with fine points of opacities.

Dr. Hansell cited the instance of a case that he had seen about one month previously. Eleven days before being seen the patient, a blacksmith, had been struck in the outer and lower scleral quadrant with a piece of steel. The point of an electro-magnet was carried into the eye through the wound of entrance of the foreign body, but nothing could be found. Panophthalmitis soon set in, the eye was removed, and a piece of steel was found imbedded in a mass of pus situated down and in from the crystalline lens.

Dr. de Schweinitz described three cases of macular hemorrhage, and presented water-color sketches of the same made by Miss Margaretta Washington, of this city. The first was one of secondary glaucoma. One month after the performance of a smooth iridectomy, which at once relieved the pain and inflammatory symptoms, a small, absolute central scotoma appeared. The ophthalmoscope revealed that this had been caused by a dark, venous-colored hemorrhage, exactly replacing the dark area of the macula. Four weeks later, the hemorrhage disappeared, leaving but a faint discoloration to mark its former position, vision returning to its previous sharpness. The second case was seen in a sixty-six-year-old woman, the subject of chronic cardiac disease. Here a less dark-colored, similarly placed hemorrhage, containing a few white dots in its center, could be seen ophthalmoscopically in the left eye. There was an absolute central scotoma. The third case was seen in a sixty-three-year-old syphilitic. There was a history of a gummatous iridocyclitis of the right eye necessitating enucleation and a parenchymatous iritis in the left eye. In April of 1895 Dr. Oliver discovered a series of hemorrhagic extravasations in the retina, with an unusually large one seated just below the macular region. In six months' time Dr. de Schweinitz found that these were absorbed, leaving a greenish-

white area with a dirty-gray circumference, from the temporal edge of which a white line extended and terminated in some yellowish spots.

Dr. Oliver exhibited water-color sketches of the ophthalmoscopic appearances of the third case during the hemorrhagic and the earlier degenerative stages made for him by Miss Washington.

Dr. S. D. Risley gave the brief notes of a thirteen-year-old apparently healthy child who presented a dense red macular hemorrhage in the left eye. In this case there was a central scotoma present.

CHARLES A. OLIVER, *Clerk of Section.*

foreign Correspondence.

LONDON LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

increase of Insanity; Appointment of a Lady Doctor; The Oldest Medical Man; The New Photography; Pasteur International Memorial; The North London Hospital; A Multiple Adenomata; New Work on Cholera; The Huxley Memorial; School Hygiene, etc.

The increase in the number of lunatics in England and Wales during the period of 1885-93 has been 15.5 per cent, and not 26 per cent, as has been publicly stated. The increase in Ireland during the same time was 21.8 per cent. The question of the causes of the increase has engaged the serious attention of the Lunacy Boards in the three countries, and with regard to Ireland a special inquiry into the subject was made in 1894.

The Duke and Duchess of York have arranged to be present at a grand fête which will be held in the building and grounds of Middlesex Hospital on July 1st to commemorate the completion of the one hundred and fiftieth year of the existence of the hospital, and for the benefit of its new sea-side convalescent home.

At the Essex County Lunatic Asylum a lady has been appointed as third medical officer to the institution. The rules did not permit of the appointment of a lady doctor until they were recently altered.

Dr. William Salmon, of Penlynn Court, Glamorganshire, has entered on his 107th year. He was born in Suffolk in 1790. He has been for fifty years a magistrate for the county of Glamorgan, and claims to be the oldest Freemason in the world.

Mr. A. F. Stanley Kent, of St. Thomas' Hospital, has succeeded in transmitting the X rays completely through the body, so that the most

deeply seated viscera become visible, and the condition of such organs as the kidneys can be investigated. The photographs which he has up to the present taken show those portions of the body lying between the fifth rib and the pelvis, and there are distinctly visible in these photographs the bones of the pelvis, the spinal column, and the lower ribs. The space occupied by the kidney is slightly more transparent in the negative, thus indicating that the kidney itself is rather denser than the surrounding tissues. As there is some doubt as to the opacity of renal calculi, Mr. Stanley Kent took photographs with a view to clear up this point. He found that although there is a considerable difference in the relative transparency of the different bones, all of them are sufficiently opaque to render it possible to differentiate them clearly from the surrounding tissues. Mr. Kent is pursuing his investigations.

At a meeting of the Provisional Committee of the British Section of the Pasteur International Memorial, Sir Joseph Lister in the chair, it was unanimously decided to apply for subscriptions toward the erection of a monument to Pasteur in Paris from persons in the United Kingdom, India, and the Colonies interested in science, and the various industries which have been benefited by Pasteur's labors. An executive committee was formed, consisting of Sir Joseph Lister, Sir Henry Roscoe, and Dr. Thorne Thorne.

The annual general meeting of the Governors of the North London Hospital considered three sets of plans for the reconstruction of the hospital, the general scheme involving the gradual building of a hospital of not less than 300 beds. The scheme would not only increase the number of beds available for the sick, but from the special form of its construction the hygienic conditions would be as perfect as the size and position of the site would admit. At present, unfortunately, there has been an alarming reduction in the amount received from subscriptions, donations, and legacies. At the end of the year the debt to bankers and tradesmen had reached a total of £14,765, an increase of nearly £3,000 upon the previous year. It was feared that unless the public supported the institution more freely with donations it would have to be closed.

Mr. W. H. Battle recently removed from the right side of the neck of a male patient a multiple exogenous adenomata of the thyroid of unusual character, the growth consisting of a conglomerate of a large number of distinct masses loosely held together by connective tissue. Their structure appeared to be in part normal thyroid tissue, in part the gland spaces were distended with multiform epithelial cells. Mr. W. Battle has thought of the possibility of the formation being akin in its origin to the compound kidney of the bear, seal, cetacea, etc., although he had been unable to find that such a disposition of thyroid ever existed in any vertebrate forms.

tions showed all stages between the formation of adenomata at the surface of certain growths and their complete isolation, the whole process being on all fours with that witnessed in subperitoneal myomata of the uterus.

A most useful little pamphlet on "The Cause and Prevention of Cholera" has been written by Mr. E. H. Hankin, chemical examiner and bacteriologist to the Northwest Provinces and Oudh. It is intended for the people of India, showing how they can easily mitigate the prevalence of cholera by strict attention to the purity of their water supply. Mr. Hankin says that twenty-four cholera epidemics, of which he knows, were stopped on the disinfection of the wells with permanganate. He advises that the permanganate should be added at sunset, so that it may have all the night to settle. In this way the sediment has time to fall to the bottom, and on the following morning the water is fit to drink. The theory being that the permanganate removes the organic matter, consequently the microbes cease to thrive.

Sufficient has been received by the Huxley Memorial Committee to permit of a statue being erected in the Natural History Department of the British Museum, and a medal to be established at the Royal College of Science. The General Committee, however, will not, at present, close their labors, as they hope to be able to undertake "the furtherance of biological science in some manner to be hereafter determined, dependent upon the amount collected." With this view they wish to either carve the foundation of exhibitions, scholarships, or lectureships.

It was stated at the ninth general meeting of the Royal National Pension Fund for Nurses that the total investments amounted to over £272,000, while the working expenses showed a distinct reduction. The proposals received for pensions showed an increase of 305, and those for sickness and insurance an increase of 123.

Dr. Charles Shelly, lecturing upon "School Hygiene," said that no morning work should be done on an empty stomach; the hardest study should be late in the day, but some hours before the pupil went to bed. He also urged the value of the general use by school authorities of a uniform system of health certificates, such as those compiled by the medical officers of school associations for the Headmasters' Association.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNA.*"

Vol. 21.

SATURDAY, APRIL 18, 1896.

No. 8.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.
JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

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THE PAN-AMERICAN MEDICAL CONGRESS.

This dignified medical body, which owes its existence largely to the disinterested personal efforts of Dr. Charles A. L. Reed, of Cincinnati, and which demonstrated its right to be at its quite successful initial meeting in Washington, D. C., in 1893, throws again its forelight into the orient of the medical sky.

At the time of its advent we ventured to say some words in its favor; we shall not repeat them here, but see no reason for changing the sentiment which prompted them.

Mexico, Central and South Americas are rapidly following the example of the United States in politics, and in business, religious, and social matters, and if it were not for the barrier imposed by a difference in language we might easily make one people.

Indeed, it is not too much to expect that the world will some day see not only this continent, but the whole Western Hemisphere inhabited by a people homogeneous as to race, language, and government. Any thing which tends to further that end should have the hearty support of every lover of this side of the world; and the bringing together of the learned representatives of the greatest of the professions—the physicians, who stand with equal footing upon the catholic platform of science, with no interests other than the promotion of truth for the

good of humanity—will do more to effect the consummation than any other possible factor.

The following is the preliminary manifesto:

THE SECOND PAN-AMERICAN MEDICAL CONGRESS.

The Committee on Organization of the Second Pan-American Medical Congress has elected Dr. Manuel Carmonay Valle, President, Dr. Rafael Lavista, Vice-President, and Dr. Eduardo Liceaga, Secretary, and has announced November 16, 17, 18, 19, 1896, as the date of the meeting to be held in the City of Mexico.

The most cordial invitation is extended to the medical profession of the United States to attend and participate in the meeting.

Titles of papers to be read should be sent at the earliest practicable date to Dr. Eduardo Liceaga, Calle de San Andres, num. 4, Ciudad de Mexico, D. F., Republica Mexicana.

The date selected is in the midst of the delightful midwinter season, when the climate of Mexico is the most attractive to the northern visitor.

The occasion should stimulate the medical profession of the United States to a most cordial reciprocation of the generous patronage accorded the Washington meeting of the Congress by our Mexican confrères.

It should be remembered that the United States is the largest, and in many regards the most important of the American countries, and that as a consequence more is expected of it than of any other Occidental Nation. In no particular is this more true than in the maintenance of position in the realm of scientific medicine on the Western Hemisphere. It is, therefore, simply essential that in this Congress—the most important of all Medical Congresses in its exclusive, yet broad American significance—the best thought and the best work of the American profession shall be conspicuous in the proceedings.

The zeal and enthusiasm of the Mexican profession and the active interest of the Mexican Government are co-operating to make the second Pan-American Medical Congress attractive, important, and memorable.

Those who contemplate attending should send their names and addresses at as early a date as possible to Dr. Charles A. L. Reed, St. Leger Place, Cincinnati, that the committee in Mexico may be advised of the probable attendance.

WILLIAM PEPPER,
Ex-officio President.

A. M. OWEN,
A. VANDER VEER,
CHARLES A. L. REED,

Ex-officio Secretary.

International Executive Committee for the United States.

THE STATE SOCIETY.

The coming meeting at Lebanon (June 10th, 11th, and 12th,) promises to excel former meetings in interest and in numbers.

The President's earnest appeal, which we published in March, and which, through his unselfish efforts is now in the hands of all doctors in the State who are eligible to membership, will certainly bear fruit in

bringing a large delegation to the meeting. And we are informed by the indefatigable Steele Bailey that the programme is rapidly taking form and will present an unusual number of interesting features.

The following, from the Chairman of the Committee of Arrangements, should be duly conned by all who expect to attend the meeting:

The Kentucky State Medical Society will meet at Lebanon, June 10th, 11th, and 12th.

On behalf of the Committee of Arrangements we cordially invite you to be present.

Arrangements are about completed by which a reduced rate will be given by the the railroads throughout the State. Delegates and visitors should purchase regular tickets to Lebanon, and at the time of purchase should procure from the agent a certificate showing that a regular ticket has been sold. This certificate should be indorsed on proper blank for that purpose by the Secretary of the meeting, and upon the presentation of this certificate, properly indorsed by the agent at Lebanon, he will sell a special return ticket at one-third fare to all points in Kentucky.

The committee have assurances that this will be one of the most successful meetings within the history of the Society, and will spare no pains to make it such.

Should you contemplate reading a paper, please send title of paper without delay to Dr. Steele Bailey, Secretary, at Stanford, Ky.

R. C. McCHORD,

Chairman Committee of Arrangements.

Notes and Queries.

A NEW SIGN OF ADHERENT PERICARDIUM.—Broadbent publishes the notes of four cases, in each of which there was visible retraction, synchronous with the cardiac systole, of the left back in the region of the eleventh and twelfth ribs, and in three of which there was also systolic reaction of less degree in the same region of the right back. In all the cases there was a definite history of pericarditis and in three of them there were other conditions strongly suggesting an adherent pericardium. The only means of causing this retraction on both sides seems to be the diaphragm, which, if pulled upon, would have more effect upon the floating eleventh and twelfth ribs than upon the more fixed ones. In cases of large heart with adherent pericardium there is a considerable area of the ventricle closely adherent to the central tendon of the diaphragm, and the powerful contraction of an hypertrophied heart must give a decided tug to this structure. That it

ETIOLOGY OF GENERAL PARALYSIS.—Hirschl (*Wein. klin. Rundschau*) analyses 200 cases of general paralysis occurring during ten months in Krafft-Ebing's clinic. Only men are treated of, as a syphilitic history is difficult to obtain in women. Hereditary influences were traceable in only 11 per cent. The majority of the patients were in the lower walks of life, and in no instance was the disease definitely attributable to psychical causes. Physical fatigue and insolation were not regarded as causal antecedents, but Hirschl admits the possibility of trauma as an exciting cause in patients already infected with syphilis, and states that this may occur in about 1 per cent of cases. He denies any connection between saturnine encephalopathy and general paralysis. He maintains that by far the most important etiological factor in the latter disease is syphilis. The pre-existence of this he considers proved in 56 per cent, and probable in 25 per cent of the 175 cases in which a history was obtainable; the incubation period varied from two to twenty-nine years. He holds that general paralysis is due to syphilis and syphilis alone, and that the 19 per cent of cases in which there was no indication of this disease in the history had probably suffered from it unknowingly. He supports Obersteiner's view of the analogy of general paralysis with syphilitic perihepatitis; both begin as inflammatory changes followed successively by disappearance of the parenchyma, interstitial changes, and eventually atrophy of the cortex or liver respectively. Hirschl thinks that general paralysis is really a late form of syphilis, beginning as syphilitic encephalitis, and going on to syphilitic cerebral atrophy. He maintains that this theory explains all the symptoms, is unaffected by the resistance of the disease to antisymphilitic remedies, and is supported by the fact that general paralysis and syphilis spread *pari passu*. His view as to the pathology of the cerebral process is based on Lang's dictum that any organ in which a gumma develops must have suffered from irritation in the early stage of syphilis. The contagion residuum in the brain of general paralytics is propagated with renewed vigor, owing to the natural hyperemia of the organ during functional activity to functional hyperemia from various psychical and mental causes, or to the occurrence of apparently slight traumatic influences.—*British Medical Journal*.

THE DIETETIC TREATMENT OF HEART DISEASE.—Glax again calls attention to the importance of limiting the amount of fluids ingested by patients suffering from cardiac disease, a point in treatment often neglected in practice, and speaks of the particularly good results obtained from digitalis and other heart tonics when this is done. He sums up his conclusions as follows: (1) Limiting the amount of fluid ingested is one of the most necessary measures in the treatment of chronic cardiac cases, and often alone suffices to restore compensation. (2) In many cases, where they have previously produced no effect, cardiac tonics show their specific action as soon as the liquid ingesta are regulated so as to correspond with this elimination.—*Boston Medical and Surgical Journal*.

PHILADELPHIA, April 18, 1896.

To the Editor of the American Practitioner and News:

At a meeting of the Philadelphia County Medical Society, held April 15th, a committee was appointed to urge the members of the American Medical Association to favor the holding of a semi-centennial celebration of its organization.

The Society also instructed its delegates to invite the Association to hold the meeting of 1897, which will be the semi-centennial, in the city of Philadelphia.

Will you kindly give in your journal publicity to this announcement, and advocate editorially the acceptance of the invitation to Philadelphia?

Yours very truly,

JOHN B. ROBERTS,
JAMES C. WILSON,
WILLIAM M. WELCH,
Committee.

ABDOMINAL SECTION FOR DISEASE OF FEMALE ORGANS.—Bazterrica and Molinari (*Annales de Gynéc. et d'Obstét.*) report one hundred and sixteen abdominal sections performed in one year at Buenos Ayres. There were only four deaths (one from total abdominal hysterectomy, two from pyosalpinx operation, and one from subperitoneal opening of a parametric abscess). The sixteen ovariectomies all recovered. Of the fifty-eight cases of removal of inflamed appendages all except two pyosalpinx cases recovered. Fourteen other cases of pyosalpinx in the same class got well. Six out of seven total abdominal hysterectomies were saved; eight intraperitoneal myomectomies and two Battey's operations for fibroid recovered. The remaining operations were less severe (exploratory, repair of hernia of cicatrix, etc.). Bazterrica strongly advocates total abdominal hysterectomy. He has performed it twenty-three times with one death only. It is greatly preferable to the older method of leaving an extraperitoneal or intraperitoneal pedicle. He also speaks well of Battey's operation when thoroughly performed. Out of four cases the hemorrhages ceased in all, in one the tumor remained stationary up to the end of the first year after operation, in two it diminished considerably, and in one, an enormous pelvic fibroid, it disappeared in six months. Operation for pyosalpinx is always attended with danger. If any pus be spilt in the peritoneal cavity flushing of the peritoneum diminishes and dilutes the germs. In such a case Mikulicz's drainage (packing the pelvis with iodoform gauze or sterilized gauze) is specifically applicable.—*British Medical Journal.*

DR. CHARLES A. L. REED, of Cincinnati, has been selected by the European Committee on Organization of the International Periodical Congress of Gynecology and Obstetrics as Honorary President of the meeting of that body to be held in the city of Geneva, Switzerland, the first week in September of this year.

THE GENTLE JANE CAKEBREAD.—The latest exploit of Jane Cakebread, the chronic inebriate whose case has attracted so much attention lately in England, largely on account of Lady Henry Somerset's determined efforts to "reform" her, and that lady's subsequent suit against the Pall Mall Gazette for \$25,000 damages for defamation of character, and who on her 280th appearance as drunk and disorderly was committed to an insane asylum, emphasizes the value of efforts to "reform" people who are mentally irresponsible. It seems that on learning from Dr. Gordon, Medical Superintendent of the Hackney Infirmary, under whose charge she was, that she had been adjudged insane, she kicked the doctor in the chest with such force as to break two of his ribs, so that he is for some time incapacitated from duty.—*Boston Medical and Surgical Journal.*

VIVISECTION AT THE HARVARD MEDICAL SCHOOL.—At a meeting of the Medical Faculty of Harvard University on March 7, 1896, the following preamble and resolution were adopted: Whereas, there is no wanton or unnecessary vivisection in the Harvard Medical School and none except that which is indispensable for humane objects of instruction and research, and whereas, no abuse of vivisection either by instructors or students would be permitted in the school; Resolved, that the legislation proposed by the Massachusetts Society for the Prevention of Cruelty to Animals is not only unnecessary, but might easily interfere with legitimate and surgical researches which are of great important to the present and future welfare of the whole community.—*Ibid.*

To the Editor of the American Practitioner and News:

The forty-ninth semi-annual meeting of the Mitchell District Medical Society will be held at Shelbyville, Indiana, June 29 and 30, 1896. An elaborate program is being arranged, containing papers by some of the most eminent men in the profession.

The Shelby County Medical Society, which has more than a State reputation as entertainers, is preparing to entertain the Society handsomely. The program will be issued about June 15th.

G. W. BURTON, M. D., *Secretary.*

X-RAYS AND MICRO-ORGANISMS.—The general interest in the x-rays, and the enthusiastic study of their characteristics by scientists all over the world, has led to the exploiting in the public press of numerous rumors with regard to their important properties and the discoveries which are being made with regard to them by this and that scientific investigator. They were reported to have a bactericidal effect, and it was hoped that they might have a controlling influence over bacterial diseases in tissues exposed to them. Numerous trials upon the cultures of bacteria have shown, however, that their growth is not affected.—*Boston Medical and Surgical Journal.*

Special Notices.

WHO?—Who does more good in the world than they who relieve suffering humanity? I have used Sanmetto in many cases where it was indicated, such as enlarged prostate of old men, and in cystitis and gonorrhea. I truly believe that I have carefully tested every remedy in the Pharmacopeia for these distressing and painful affections of humanity, and none give relief like Sanmetto. In one case where solid casts from the urethra were voided (resembling chicken guts), where micturition was so frequent as every ten or fifteen minutes night and day, and where the catheter would not pass into the bladder Sanmetto brought relief. I consider it the great reliever of those affections.

Webster, W. Va.

C. N. BROWN, M. D.

It is not generally known that in those cases in which a soluble salt of an alkaloid is employed in connection with the commercial bromide salts, precipitation of the basic alkaloid takes place, making a very dangerous mixture. This state of affairs is caused by the abnormal amount of chlorides as an impurity in the commercial bromides. All this trouble can be averted by prescribing Peacock's Bromides in all cases in which the bromides are indicated. It is a convenient and palatable preparation, and, when prescribing, it is only necessary to bear in mind that each fluid drachm contains fifteen grains of the combined chemically pure salts.

J. L. RIDLEY, M. D., Huntsville, Ala., says: I have used S. H. Kennedy's Extract of *Pinus Canadensis*, both white and dark. I can frequently cure gonorrhea without any other remedy. I use either as an injection, and prescribe the dark internally, where there is irritability about the mouth of the bladder. I have learned to regard it as a specific. In chronic cystitis I have derived great benefit from it, and in leucorrhea it relieves when many other remedies fail. It is a valuable remedy, and I have had marked success with it.

DR. CHAS. WINFIELD SCOTT, in his work on "Key Notes of Health," says: Acute disease weakens the heart by exhausting its nervous energy, interfering with its nutrition, and lowering its general tone, hence the importance of using Cactina Pillets in all acute disease, fevers, etc.

LABOR SAVING: The American Medical Publishers' Association is prepared to furnish carefully revised lists, set by the Mergenthaler Linotype Machine, as follows:

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THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

VOL. XXI.

LOUISVILLE, KY., MAY 2, 1896.

No. 9.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

REPORT ON THE PROGRESS OF OBSTETRICS.*

BY A. D. PRICE, M. D.

In reporting on the progress of obstetrics during the past year there are no startling announcements to claim your attention, but rather the consideration of conservative and well-established principles for the guidance of those who labor in this department of medicine.

The growth of civilization brings to the child-bearing woman many dangers which her primitive sister, "free of artificial environments and without perverted tastes or unnatural habits," rarely encountered. Civilized life with its social customs and the often perverted laws of hygiene renders the subject of obstetrics of the greatest importance.

Heretofore the teaching of this branch of medicine was unsatisfactory, and the graduate was sent into his field of labor with only a limited knowledge, and no clinical experience of midwifery. He had to learn at the bedside the art unaided, without a master hand to guide. Thus there have been, and are to-day, so many bungling and incompetent obstetricians. Happily this state of things is passing away, and the student is receiving in the best colleges instructions, theoretical and clinical, that will enable him to properly discharge his duties at the bedside.

Before another decade has passed the progress and increased facilities of medical teaching will enable every competent and ambitious

* Read before the Central Kentucky Medical Association, April 16, 1896.

student to fully prepare himself for the faithful and efficient discharge of his duties in this and other departments of medicine.

The midwife has had her day, and will soon be known as something that was; and the bungling, incompetent, unclean physician will soon follow. The public is awakening to a sense of the importance of the management of the pregnant and lying-in woman, and is expecting and demanding better service than it has heretofore enjoyed.

The man who realizes his responsibilities and is prepared to meet them; who keeps himself clean, demands the same of the nurse, and sees that the patient is aseptically managed during labor and the lying-in; who knows the condition of the woman before labor, having investigated her digestive, circulatory, genito-urinary, and nervous systems and pelvic region, including its diameters; who leaves her in a state favorable to the restoration of health and happiness, is the one whose counsel will be sought by this important class of patients.

There is no excuse for ignorance, and less for carelessness and uncleanliness. The medical attendant should be competent, prepared for every emergency, and a firm believer in asepsis, secured by thorough and prolonged scrubbing with soap and hot water aided by antiseptics. Believing thus he will be, and not otherwise, enabled to put himself and patient in such a condition that sepsis will be avoided.

In the current medical literature of the past year the importance of thorough cleanliness, as it pertains to the lying-in woman and her surroundings, is most pronounced.

It is proper that due preparation should be made for an act so important as that of parturition. The best room in the house (ventilation, sunlight, and quiet being important factors) should be selected; all unnecessary furniture and hangings should be removed, and the bed properly arranged, every thing about it being absolutely clean. The patient next claims attention; her bladder and rectum should be emptied (this being an invariable rule); she should be thoroughly scrubbed from waist down with hot water and soap, and then well bathed with a bichloride solution, 1 to 1,000, and robed simply in a freshly laundered gown. A vaginal antiseptic injection may or may not be used. Its usefulness is doubted by many. During the past year I have employed it in a number of cases and omitted it quite as often, and was unable to see any difference in the result. I consider it a matter of no special importance except in filthy cases, or in patients infected with gonorrhea or syphilis. Recent statistics rather favor its non-employment. It

is claimed, not proved, that it "dissolves the mucus, sets free the imprisoned germs, weakens the resistance of the tissues, and contributes to the extension of the sources of infection."

The *ante-partum* injection as a routine for the prevention of sepsis is, moreover, discountenanced by the following considerations: The vagina, which is not a closed canal, contains micro-organisms of the greatest variety, but many of them "have no action upon the tissues;" the pathological bacteria are "mostly anaerobic and do not enter the circulation nor thrive in the blood." Doderlein claims that he has discovered a bacillus which intensifies the acid reaction of the vaginal secretion and renders the latter unfavorable to the multiplication of the streptococcus, "the dreaded enemy of the child-bearing woman;" the cervical canal is guarded against the invasion of the vaginal micro-organisms by the mucous plug, "which possesses destructive properties and in which the germs can not multiply;" and the leucocytes also form "a line of defense between the attacking germs below and the clear portion of the mucous plug above." "Thus in natural labors the protection of the uterine canal is complete. Contagious material has to be carried to it from without. The entire parturient act serves to guard the woman against infection. With the rupture of the membranes a downward current is produced by the escape of the amniotic fluid. The descent of the child cleanses the vaginal canal, and the associated leucocytosis and increase of vaginal secretion are both inimical to the action of the septic germs;" the passage of the placenta completing the toilet of the vagina.

The attendant's hands should be thoroughly aseptic, and as few examinations made as possible, thus lessening the source of infection. The cleansing and disinfecting the hands should precede each vaginal examination.

The perineum should be thoroughly cleansed and the hand protected with aseptic gauze when support is deemed necessary.

Haste should not be made in the delivery of the placenta. Give nature plenty of time, half an hour or more, to accomplish her work unless there is some condition demanding its prompt removal. Never pull on the cord, but employ Crede's method, making gentle compression in the line of the pelvic axis. Always examine the placenta, and be sure that none of its tissue or membranes are left in the uterine cavity. The patient should be carefully watched for an hour, and the uterus kept properly contracted by the most gentle manipulations.

The so-called hour-glass contraction is a misnomer. Hirst teaches that the part of the uterus in which the placenta lies fails to contract; the contraction in the lower segment being normal. To remove the placenta when this condition exists, introduce the hand, grasp it, and await expulsion by uterine contractions. It is well to remember that the placenta is generally retained, rarely adherent, and that the absolutely clean hand can be carried without danger into the uterine cavity.

Ergot should never be given until the uterus is empty; there is no condition demanding its use before.

All tears and lacerations should be closed at once unless the condition of the patient forbids.

The attendant should be careful not to infect, as I have occasionally witnessed, the patient by introducing a finger in the rectum to evert the posterior vaginal wall, and then employ the same finger, without being cleansed, within the vagina.

After delivery is completed the patient should receive a vaginal antiseptic injection, be thoroughly washed with soap and hot water, robed in a clean gown, and put in a bed suitably prepared for the occasion.

The physician, unless he has a reliable, trained nurse, should give all vaginal injections himself, using his own syringe which he should know to be aseptic.

In feeble women, and in those who habitually flood, the use of iron and strychnine during the last weeks of pregnancy will prepare them for a better and safer delivery. In cases of protracted labor, where there is no obstruction, when the patient is becoming exhausted and pains weak and inefficient, or serious shock is threatened, the hypodermic injections of one twentieth grain of strychnine, repeated according to indications, will revive the flagging powers and often enable the parturient act to be normally and safely completed.

The breasts require careful attention. Preceding delivery it is wisdom, as a rule, to do nothing. Efforts to harden and develop the nipples are generally harmful and should not be employed. Prophylactic measures (the prevention of congestion, the avoidance of too frequent nursing, keeping the nipples dry and clean, protecting abrasions, healing fissures, and guarding against mechanical injuries) should be rigidly enforced, and thus prevent much suffering.

The induction of premature labor sometimes becomes a necessity in patients threatened with exhaustion from excessive and prolonged vomiting, in certain cases of contracted pelves, or where there is pelvic

obstruction due to tumors, cancer, etc., that would prevent normal delivery. In these latter conditions the uterus must be emptied at an early period, or the woman submit, later on, to a more radical operation by which her life and that of the fetus may be saved, the election being determined by the condition of the patient and her desires.

Not long since I induced premature labor in a primipara, aged forty years, five months pregnant, and during which time she vomited incessantly. Her first attendants never made a vaginal examination, and diagnosed her condition as due to almost every thing except the right one. She came under the care of a medical friend who recognized her pregnancy, and with whom I saw her in consultation. The uterus was thoroughly emptied, but death supervened from exhaustion. The autopsy revealed the uterus studded with a number of small fibroid tumors.

In the induction of premature labor the patient should be placed across the bed in the lithotomy position, and her abdomen, thighs, external genitals, and vagina cleansed with soap and hot water and then bathed with a bichloride solution 1 to 1,000. Seize the cervix with a tenaculum, draw the uterus well down and insert a sterilized gum bougie, having been soaked in a bichloride solution 1 to 500, between the membranes and uterine wall to the fundus. Pack the vagina loosely with iodoform gauze and over the vulva place an antiseptic pad. Remove the bougie in twelve hours. If the cervix is not sufficiently dilated, reintroduce under the same precautions, and let it remain about the same length of time. The cervix is now generally dilatable and will readily yield to the finger, steel-director, or Barnes' bags. The use of the latter requires special care to avoid sepsis. After the uterus is emptied it should receive a bichloride irrigation, 1 to 2,000, followed by hot sterilized water.

Placenta previa is rarely fatal before the seventh month, but when the diagnosis is made, at whatever stage of pregnancy, the only safe rule is to induce labor. In emergency cases of this character the attendant, if he has time, should first tampon, then call an assistant and anesthetize the patient, place her in the lithotomy position, remove the tampon and perform, under antiseptic precautions, version, combined version, or deliver with forceps, the selection of the particular method being governed by the position of the fetus and the condition of the mother. Should a foot be brought down, then the labor should be left to nature, as haste to deliver would endanger the life of the child.

Eclampsia is better prevented than cured. By due attention to every function, by the use of baths, the milk diet, the administration of iron, or the induction, in certain contingencies of premature labor, this dangerous complication can generally be avoided.

When the profession realizes the necessity, and the laity is taught the importance of the pregnant woman being under constant medical supervision from the earliest months of pregnancy to the completion of the lying-in, the many dangers to which she is now subjected will become an unknown quantity. I have expressed this sentiment on many occasions, and hope it has not become so trite as to be devoid of interest.

It is now a well-established fact that puerperal fever is a surgical fever, the sepsis being carried from without in, except in those rare cases where the source of infection is some pre-existing pathological condition not due to the pregnant state. Puerperal fever would become an almost unknown disease were the physician, nurse, and patient absolutely clean, were there freedom from unhealthy surroundings, and the avoidance of those conditions that favor its development. And among these may be enumerated frequent examinations, uncalled for cervical manipulation and dilatation, retention of placental tissue or membranes, injured "maternal tissues; lowered vitality from hemorrhage, from the long continuance of labor, from deep wounds, from eclampsia, from complicating diseases."

That slovenly obstetrical practice is the cause of many of the ills of the lying-in woman is self-evident. Every case of puerperal sepsis proves negligence, carelessness, or ignorance on the part of those who have charge of the patient. Death from puerperal fever, although much less frequent than formerly, is occurring here and there in every community, and teaches us in a most forcible manner that the principles of asepsis are not generally comprehended, or at least not fully practiced.

When septic infection has occurred, what is the best method of procedure? Due consideration for your patience forbids me entering fully into its consideration. Permit me to state briefly the indications: Disinfect the vagina; thoroughly free the uterus of all debris with the fingers, placental forceps, or dull curette; wash out the uterine cavity with an antiseptic solution followed by hot sterilized water, and introduce a suppository of iodoform or pack with iodoform gauze.

It is well to remember that the douche should not be repeated, frequent douching being dangerous; that the sharp curette should never

be used ; and that the indiscriminate and injudicious use of the dull curette may convert a mild case into a severe one.

Hysterectomy in puerperal sepsis is receiving the earnest consideration of the gynecologist, and he will ere long, doubtless, be able to tell us when to operate and when not to. Until that happy period arrives only the favored few should attempt so serious an undertaking.

It is the physician's great mission to not only cure disease but to prevent it, to teach the people how to live, and to make them better, wiser, and happier. And the time has come when he should realize his responsibilities more than ever, and condemn in the strongest language and without ceasing the practice of criminal abortion, a crime which is confined to no country, no race, no social condition. It is practiced to an alarming and increasing extent among the civilized and the heathen, the rich and the poor, the intelligent and the ignorant, the white and the black, the married and the single. Its victims are found everywhere—in the city, the town, the village, the hamlet, and are not hid from the knowledge of the custodian of the secrets of the sick-chamber. Death from criminal abortion occurs in every community, and we can not shut our eyes against it. It is the duty of the physician, the clergy, the teacher, and every good citizen to show its immorality, to denounce its criminality, and to unvail its dangers—death, ruined health, degradation of the social system, and destructive tendencies to the family and the nation.

HARRODSBURG, KY.

THE TREATMENT OF EPIDIDYMITIS.

BY J. BRENT PALMER, M. D.

Assistant, Genito-Urinary Clinic, University of Louisville.

There is probably no disease in which the physician is more uncertain as regards the prognosis of its course than gonorrhea. Seldom indeed does a man suffering with this malady consult a doctor without asking how long before he will be well, and without evincing great surprise upon being told that the best authorities say never to promise a cure in less than ten weeks, and only then provided no complications arise.

Posterior gonorrhea, or gonorrhea of the bladder, occurs in such a large majority of cases, sooner or later, that it is now regarded as a sequel rather than a complication of the disease. Prostatitis, seminal

vesiculitis, and even stricture are complications which the duration, character, and severity of the disease will sooner or later lead us to suspect; but who can, with any degree of certainty, tell whether or not an epididymitis, with its almost certain secondary orchitis, is to follow? It may occur in any stage of the disease, early or late, and is the bugbear of the physician who attempts to answer that almost invariable query of his patient: "Doctor, is this disease going to lay me up; will I be compelled to quit my work for any length of time?" etc. How often do we have a patient, who has been under treatment for weeks, leave us one day, to all appearances practically well and with every thing pointing to a speedy cessation of all trouble, only to summon us to his bedside the next day to find him suffering the agonies of an epididymitis.

Little or nothing that is new can be said in regard to the preventive treatment of this most painful of the attendant complications of gonorrhea. The prescribing of the suspensory bandage in the beginning of the disease, together with the admonition to avoid all forms of violent exercise, about cover that ground.

The question which is of much more importance is, how, when actually confronted with an epididymitis, to permanently alleviate the pain and place the patient in condition to attend to his daily duties with the smallest possible loss of time. Poulticing with flaxseed, tobacco, etc., is an excellent method to pursue, though the benefit derived from any one of these is necessarily slow. Modern ideas, together with the utmost hustling of the present age, naturally lead one to look for a remedy whose effect will not only be accomplished in a shorter time, but will also combine permanent with immediate relief.

Cauterization with nitrate of silver has been for some time pre-eminent as abortive treatment for epididymitis, and is certainly efficacious, giving almost absolute relief from pain in an incredibly short space of time, followed by a rapid subsidence of all swelling. The chief objection to this treatment is the superficial ulceration certain to follow the application of so strong a cautery, with a possible subsequent septic infection, thus forming an ulcer which will require treat-

this trouble. The method of carrying it out is very simple. Twenty minims of the guaiacol are painted over the region of the cord and the globus major of the affected testicle; hot applications are renewed every half hour throughout the day and the ichthyol ointment is applied at night. The majority of patients in whose cases I have seen this course pursued have been able to be up and out within forty-eight hours, and several were not compelled to "lay up" at all. It might be well to mention here that it is rarely necessary to apply the guaiacol more than twice before almost absolute relief from pain is obtained, and that beyond a rather severe temporary burning sensation its application is followed by none of the disagreeable after-effects of nitrate of silver. Dr. I. N. Bloom and myself have used it in his clinic at the University of Louisville, exclusive of all other treatment, throughout the past eight months, and while clinic patients as a rule are very hard to keep track of, the results obtained in those cases which we were enabled to keep under observation were most gratifying.

CASE A. Young man presented himself with an enlarged and painful testicle in the morning. The guaiacol was applied immediately without the subsequent treatment, on account of his not being in position to "lay off" for the day, and he was enabled to continue his occupation, which was that of a broom-maker, uninterruptedly.

CASE B. Medical student presented himself with an epididymitis following a gonorrhea of several weeks' standing, and was suffering intense pain. The guaiacol, with subsequent treatment, was used at night and gave great relief. He, however, went out the following day, walked around a great deal, and that night suffered a relapse of the original pain. The guaiacol was again applied, and on the fourth day he was suffering little or no inconvenience.

CASE C. A traveling salesman had been suffering with an epididymitis and orchitis for five days. He had been treating himself with flaxseed poultices, but experienced no relief, being unable on account of his occupation to remain any length of time in bed. Three applications of guaiacol in the course of thirty-six hours relieved the pain, and in forty-eight hours after the first application he started out on a trip and experienced no return of the trouble.

CASE D. Was that of a commercial traveler, aged about thirty-five, who presented himself one evening suffering intensely with a traumatic orchitis, due to a kick received a short time before. The

application of guaiacol in this case, together with a suspensory bandage, gave almost immediate relief from pain. The patient left town early the following morning, so I had no opportunity of observing whether there was any diminution in the swelling or not. He complained of quite a severe burning sensation immediately after the application, but it soon passed off.

LOUISVILLE.

RHEUMATISM AS IT AFFECTS THE EYE, EAR, NOSE, AND THROAT.*

BY WM. CHEATHAM, M. D.

Professor of Diseases of the Eye, Ear, and Throat, Louisville Medical College.

By request of your president, I select this subject as a continuation of the most excellent paper of Dr. Cecil, read at the last meeting of this Society.

Rheumatism can and does involve about all of the tissues of the eye, ear, throat, and nose. It is more liable to produce in the eye, ear, and nose the serous forms of inflammation. In the eye it can produce neuroses of either motion or sensation; it can produce paralysis of both external and internal muscles and muscles of the lid; it produces conjunctivitis, episcleritis, scleritis, keratitis, iritis, either serous or plastic, more commonly the former, and, next to syphilis, is the most common cause of iritis, retinitis, choroiditis, cyclitis, neuritis, ciliary or optica, the coats of the blood-vessels, and embolism; inflammation of the periosteum of the orbit, acute or chronic, with exostoses or necrosis of the bone, and all may result from rheumatism. Three symptoms are prominent in rheumatism of the parts mentioned; that is, their chronicity, tendency to frequent recurrence, and, if such a word is proper, their fugaciousness.

The diagnosis of rheumatism, especially of the ear, nose, and throat, is most often made by exclusion and by the result of antirheumatic treatment; and again, especially in rheumatism of the pharynx and larynx, there is such a great difference between the local, which are slight, and the general symptoms, which are often severe. For instance, there may be such local pain on swallowing even the saliva that a patient

peculiar arrangement of the blood-vessels, but it is uncommon. Local astrigent applications increase pain, etc.

The tonsils are frequently involved in rheumatism. Quinsy is considered by some authors as always rheumatic in origin. Lately there has been a reversion in this opinion, some authors considering the pain in the limbs and back, called rheumatic, as the result of sepsis from the diseased tonsil. A purge and antirheumatic treatment, with hot applications locally, and hot alkaline and carbolized washes, relieve tonsilitis, when no surgery is indicated, quicker than any other form of treatment, and will abort quinsy if commenced in time.

The larynx is frequently involved by rheumatism, the mucous membrane, muscles, nerves, vocal cords, and joints, and of the cartilages, none of them escaping. The ear, by extension of disease from the pharynx, nose, and tonsils, may become secondarily involved. There is no part of the ear, either external, middle, or internal, but what can be affected directly by rheumatism. The lining of the external canal is subject to rheumatic inflammation, but not so often as from gout; the periosteum of the ear suffers in rheumatism; exostosis occurs in the ear as the result of rheumatism; ankylosis of the ossicles also; in fact, as I stated before, all the tissues of the ear are subject to rheumatic inflammation.

I have often found rheumatism of the organs referred to in this paper with no general symptoms of rheumatism, the patients denying most positively that they have rheumatism, and in some days, weeks, or months other symptoms develop confirming the diagnosis.

It will be observed in my short paper that I have not adhered strictly to the text of Dr. Cecil's paper, "Acute Rheumatism." My belief is that "acute rheumatism" is probably septic. Its method of invasion, its symptoms, and its being a self-limiting disease, leads me to this belief.

LOUISVILLE.

HUNTING A LOST BALL.—The Röntgen ray and the location of bullets brings to mind an old army story about a general officer, who having been wounded in the fleshy part of the leg, the surgeons made many incisions. At last, growing tired and worn with pain, he asked if they were nearly through dressing his leg. "I am looking for the ball," said the operating surgeon. "Why the devil did you not say so before?" roared the officer, "I have the ball in my pocket."—*Journal of the American Medical Association*.

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, February 21, 1896, Dr. W. L. Rodman, President, in the chair.

Presentation of Clinical Cases. Dr. J. M. Ray: Through the kindness of Dr. W. O. Bailey I present to the Society a case that I have watched with a great deal of interest. The patient is twenty-three years of age and a telegraph operator. Since March, 1895, he has complained of headache and occasional double vision. Dr. Bailey examined his eyes and found a slight degree of astigmatism in both eyes; he also had slight weakness of the right internal rectus muscle and paralysis of the right inferior rectus, and semi-dilated pupil. We talked over the symptoms presented at the time he consulted Dr. Bailey, but could not find any sufficient cause for them. Later Dr. William Bailey and Dr. Cottell saw the patient, but they could not locate any cause of the ocular condition and the persistent headache. He was put on iodide of potassium and continued the drug for some time.

About three months later he was again seen by Drs. Bailey and Cottell, but no organic cerebral condition nor any disease of the kidney could be detected. He was put upon Donovan's solution without any result. In October he went to New York and there consulted a well-known diagnostician, who could not find any organic disease. An ophthalmologist, in New York, wrote a letter stating that all he found was slight ptosis and paralysis of the rectus. He went home and on December 12th, while getting out of bed, fell in an unconscious condition and remained so for thirty-six hours. During the period of unconsciousness there was quite a free flow of pus from the mouth. He passed from an unconscious into a semi-conscious condition, and after about ten days began to improve. He noticed that the right side was weak; there was also complete ptosis of the right eye. These symptoms have all improved, and he has consulted Dr. Bailey again on account of an eye inflammation. Yesterday, when I saw him, he presented an abrasion of the lower part of the cornea with severe irrita-

by the infra-orbital nerve. In addition to these symptoms, examination with the ophthalmoscope shows a large retinal hemorrhage. I examined his throat and nose carefully, trying to find pus in the sphenoidal sinus. The nose is free from pus, and there is no evidence of antrum disease. Another peculiar feature of his case is that before the attack his weight was only ninety pounds, he now weighs fifteen pounds more than ever before.

Dr. S. G. Dabney: I suppose all of us must admit that the diagnosis in this case is obscure and uncertain. I think we might find a close connection between the discharge of pus from the nose and the symptoms of ocular paralysis. It would seem to me that the case is one of pus in the sphenoidal sinus, and that this has given rise to meningitis extending along the base of the brain. It is of course very difficult to account for the paralysis of the nerve, but we do find very remote symptoms from pus in the accessory sinuses about the nose.

Dr. Wm. Cheatham: I agree with Dr. Dabney that inflammation of the accessory nasal sinuses may give rise to remote symptoms. The damage to cornea, neuro-paralytic keratitis, is simply due to loss of sensation and accumulation of foreign substances upon the cornea, the patient not feeling the foreign substances much irritation is the result.

Dr. Ray: I do not understand how inflammation in the sphenoidal sinus would cause such extensive involvement of the nerves of the face. The patient has trouble with the third, fifth, and seventh nerves.

Exhibition of Pathological Specimens. Dr. A. M. Cartledge: I removed from a woman, fifty-five years of age, three specimens of gall-stones. There was a history of pain in the right side for over a year, but at no time had it been so severe as in the last week. The diagnosis was made of an enlarged gall-bladder, and an operation was performed to-day. The gall-bladder was not so much enlarged, most of the tumor being made up of omentum. The adhesions were separated and the gall-bladder incised. It was inflamed, and an ounce of pus escaped with these calculi. The cystic duct was shut off by old ulcerative changes. In cases of impaction I believe the function of the gall-bladder is restored. My experience is that we rarely find a true empyema of the gall-bladder. All my other cases but one have been associated with mucus, sometimes as clear as glycerine.

Dr. John A. Ouchterlony: The pathological anatomy of this condition is very interesting indeed, and I do not think it has been worked

up quite as much as it might be. I was very much surprised, a short time ago, in looking over a fasciculus of a work on pathological anatomy that is being published in Germany. It is made up of a series of reports of cases, with the history of each, and an illustration of the condition of the gall-bladder and ducts. I have had copies of these made, and expected to bring them here to-night, but being hurried failed to get them. In one of the cases there were adhesions between the gall-bladder and the bowel, and in these adhesions ulceration had taken place. There was a fistulous opening between the duodenum and the gall-bladder, and in this fistulous tract a gall-stone was found. Another condition that I had never met with in all my *post-mortem* experience was this: The gall-stones had found their way into the cystic duct, and had gotten up into the hepatic duct, and some of them remained there; others had gotten into the common choledoch duct. In some of these cases there was occlusion of the cystic duct, and a considerable number of stones in the gall-bladder. In one case, which was the most remarkable to me, the common choledoch duct had formed a projection into the duodenum, and in this sac formed by the duct there was an accumulation of gall-stones.

There was a series of the most curious changes such as I had never dreamed of there being any possibility of, and I think the experience of these men was to the effect that operative interference in cases of cholelithiasis was called for much more frequently than we at present believe. I have held back a good deal, feeling that so much could be done by medicinal treatment, and it was only in cases of extreme urgency that I would give my consent to an operation, but I feel satisfied that it should be done a great deal more frequently than I was formerly inclined to believe.

Dr. L. S. Murtry: There are several points brought out that are very interesting. The practical operative point that Dr. Cartledge presented is perfectly correct and will be conceded. It is always unsafe to leave surfaces that may allow septic material to get into the peritoneal cavity. I believe also that pus collections in the gall-bladder are rare. In the majority of cases the mucus that fills the gall-bladder is a clear, limpid, mucilaginous material. It seems to me that cholecystotomy is such a satisfactory operation I do not see how we can wish any thing better.

Dr. Cartledge: I presented to this Society, at a recent meeting, a series of cases and, strange to relate, I encountered every condition

enumerated by Dr. Ouchterlony, except the dipping of the common duct into the duodenum. In his discussion of the pathology of this affection the doctor has presented a very interesting subject and one of great importance. It is astonishing what meager knowledge many physicians possess of diseases of this locality. I have seen five cases in seven days. If one half the cases of acute indigestion were considered as periodically distended gall-bladders with stone, I think diagnosis would be correct. They are extremely common; you will find the gall-bladder fill up at times; they will have pain and will be treated for indigestion. The mucus will finally pass away and the stone slip back. The large stone which I show here was about to rupture into the bowel. Very few people are well who have a fistulous opening between the gall-bladder and the bowel; and this is the greatest objection to Murphy's operations. It is better to have the fistulous opening externally until the ulcerated part gets well. I do not think it is best to fasten the gall-bladder to the intestine unless there is obstruction to the duct which can not be relieved.

Dr. W. L. Rodman: This sac and piece of omentum were removed yesterday in a right inguinal hernia operation in a boy about eleven years of age, the hernia being of the congenital variety. There are two or three points of interest in the case. In the first place, the omentum was attached to the sac; it was in every sense of the word an irreducible hernia. Some authorities dilate considerably on the infrequency of irreducible hernia in children. While I am not prepared to deny that irreducible herniæ are less common in children than in adults, I have seen three cases that I call to mind in the last three years. The second point of interest in connection with the case is that there are three congenital herniæ, all of the right side, in the same family of seven children. A brother of this boy I operated upon three weeks ago, and he is now well.

Another point of interest is that the father and mother of these boys are both deaf mutes, and yet all the children are bright, and talk and hear perfectly well. I would like to know whether or not it is unusual for congenital deaf mutes to have such a large number of children all free from this defect.

Dr. Ray: Statistics with reference to deaf-mutism show undoubtedly that there is a strong tendency to hereditary transmission. You will find in Roosa's book on the ear some statistics on the subject. There

are many cases considered as congenital deaf-mutism that are in reality due to some inflammatory disease in early life that has led to destruction of the conducting apparatus and deficiency in this way.

Dr. A. M. Vance: On February 8th last, Mr. M., aged forty-three, was referred to me by Dr. Ringo, of South Louisville, on account of a swelling in the right side of abdomen. He had been sick three months, and had lost forty pounds in weight. At the beginning he had been treated as a walking case of typhoid fever, the physician in attendance at that time prescribing a mixture containing copperas, strychnine, and mercury. Shortly after beginning this treatment he "swelled up and vomited a great deal." For several weeks he had been passing large quantities of pus by the bowel. He was very pale, pulse 130, temperature 103.5°, still he had walked from the street car to my office, two squares distant. The abdomen was only slightly distended; the bowel had acted naturally that morning. In the right of the abdomen there was a well-defined doughy tumor as large as a man's two fists, moderately tender, the middle of the tumor corresponding to McBurney's point. I thought it to be an appendicitic abscess, with an opening into the bowel; the sac refilling at intervals and keeping up a septic fever, and advised an exploratory incision. The next morning I sent him to the Norton Infirmary, and at three o'clock in the afternoon opened the abdomen as for an appendicitis. On incising the abdominal wall I came to the tumor so plainly to be mapped out before, firm adhesions being found between the tumor and the abdominal wall, with evidence of inflammation. Carefully opening the mass I was surprised to find a large cavity comparatively empty. Sweeping my finger around in search of the cause of the abscess I could discover very little, caseous pus in moderate quantities coming away on my finger. When about to close the wound I felt what I considered might be the remains of a necrotic appendix deep down in the bottom of the cavity. Carefully separating adhesions and drawing this up to the surface was what turned out to be the small intestine near the cecum. I was greatly puzzled at first, as the bowel had no peritoneal covering or mesentery, and was completely bloodless. The part between the large opening and the cecum seemed in better condition, but there was no mesentery or peritoneal covering to this. I completed the section at the large perforation and gently drew out this much-narrowed and lifeless tube, coming to new perforations every two or three inches. After removing about eighteen inches,

and no sign of good bowel appearing, the same blanched and necrotic tube was to be traced deep down into the pelvis. All this investigation was done without entering the general cavity. Finding it impossible to bring good intestine into anastomotic apposition with the cecum, which seemed in fairly good condition, I determined to break up the firm adhesions separating my field of work from the general cavity, and try if possible to disentangle the diseased from the healthy bowel, and thus accomplish anastomosis. I found a general plastic peritonitis over the area exposed and the intestines completely matted together. In attempting to separate some of the coils in an effort to trace down the necrotic tube into the pelvis, perforation after perforation was produced. After repairing the tears, the patient was beginning to show marked effect from shock, and I finished the operation by stitching the free ends of the small bowel in each angle of the wound and got the man to bed. I expected him to die within forty-eight hours of general peritonitis, but, astonishing to state, he lived twenty-five days, finally dying of exhaustion. There was no evidence of fecal matter in the intestine removed, nor in the cecum, and absolutely no odor connected with the condition. There was no evacuation by the natural channel after the operation, but all came by the artificial opening.

At the *post-mortem* by Dr. J. B. Bullitt the cecum was found full of soft feces and the appendix in a healthy condition. The intestine traced from the fecal fistula went deep down into the pelvis, where there was firm attachment to the upper part of the rectum.

This is a curious case. What was the cause of all this poor fellow's trouble? Was it a case of typhoid fever with perforations and abscess, or did the typhoid fever medicine have any thing to do with the remarkable condition found in the abdomen? I rather lean to the opinion that it was primarily a case of typhoid fever. Why the man did not die of peritonitis before I ever saw him I am at a loss to say, and why he lived so long after I did see him I am at a greater loss to explain. The microscopic examination of the specimen removed shows it to be composed of the mucous and submucous coats of the ileum.

Dr. McMurtry: The case is certainly unique and interesting. There is just one suggestion I would like to mention about the case, and that is, might it not have been an intussusception, with these changes occurring in a long time? The altered relation of the intestine with the entire shutting off of circulation certainly impresses me that it was in its origin an intussusception.

Dr. H. A. Cottell: I do not know any better way than the one advanced by Dr. McMurtry to account for the condition. I certainly do not think any combination of corrosive drugs would select out the lower end of the ileum for action. Whether the dose taken was large or small, the first symptoms would have been gastritis.

Dr. Wm. Bailey: I have seen a good many abdomens opened by my friends, the surgeons, but I have never seen a case like this before; and these perforations seem to have been such as would have been produced by typhoid fever. In the first one found it seemed to me that the gut was about to separate, owing to the extensive ulceration which involved at least, it seemed to me, one half the caliber of the gut. There was no mesenteric attachment.

Dr. Cartledge: This is a very unusual specimen, and, if it is not intussusception, is a unique case. I do not believe it is intussusception, but a case of what is known in medical history as tubular diarrhea, and that the specimen represents a cast of the mucous membrane of the intestine. It is the first time to my knowledge that such a condition has presented as a surgical case. I think the specimen represents a tube cast of the lower end of the ileum with a little suppuration between the submucous and muscular layers, the pus finally breaking into the bowel.

Dr. Bailey: A difficulty in the view expressed by Dr. Cartledge is that a cast must of necessity be a cast of something. This was not in the intestine, but in the abdominal cavity. In intussusception the part that is constricted sloughs, union takes place above and below, and the portion of intestine cast off goes on down the bowel. This specimen came into view by virtue of the abdominal incision.

Dr. McMurtry: My idea was that the intussusception had not gone on to spontaneous cure, but had arrested the circulation in this segment of gut. You may have intussusception without complete obstruction.

Dr. Cartledge: On close examination I believe the whole of the bowel is here, and that there has been an obstruction from bands cutting off a loop of bowel, and an anastomosis has been formed around it.

Dr. T. H. Stucky presented a specimen of scirrhus cancer of the liver removed from a woman, aged fifty-two years. An interesting point in the history of the case was that two years ago the left breast was removed on account of a malignant growth, the microscopical diag-

nosis of which was sarcoma. On the 26th of November last she had an attack of what appeared to be biliary colic, and suffered severe pain for several days. Previous to that time there had been no symptoms referable to the liver. There were in the right axilla some lymphatic glands enlarged to the size of a hazelnut, but there was no sign of reinfection in the mammary region. No other organ was involved. An interesting question in connection with the case was, whether the growth in the liver was secondary to cancer in the breast mistaken for sarcoma, or whether it was primary and independent of the breast tumor.

Dr. Rodman: This case, if it is secondary to a similar tumor of the breast, does not bear out the teaching on the subject of Gross; that is, if these cases go for two years after operation without a return of the tumor there would be no recurrence. If three years have passed, there are very few cases that will return either *in loco* or in some internal organ.

Dr. W. O. Roberts: I have a patient whose breast was removed seven years ago and who now has recurrence in the other breast.

Dr. Vance: I would like to put on record a case that recurred fifteen years after the primary operation.

Dr. Rodman: I am glad that Dr. Roberts and Dr. Vance have reported cases of late recurrence. I did not mean to say that cases do not recur after three years, but that is a good practical rule.

Dr. Bailey: I would like to ask whether a person may not have two cancers entirely independent of each other; whether, as in the case reported by Dr. Roberts, the first cancer had any thing to do with the second.

Dr. Rodman: I should say, where a woman goes eight or nine years and then has a tumor in the other breast, the evidence was very much in favor of it being a primary case and not a secondary one. I have now under treatment a woman with a benign tumor in each breast, of course not dependent upon each other.

The essay was read by William Cheatham, M. D.; subject, "Rheumatism as it Affects the Eye, Ear, and Throat." [See page 330.]

Discussion. Dr. Dabney: The subject is of so much interest to specialists working in my line that I am sorry the essayist did not go more fully into it. As he stated, rheumatism involves all the structures of the eye. He mentioned that optic nerve inflammation may arise. Some authors deny this. I may be pardoned for mentioning the case of a lady who had a well-defined case of rheumatic iritis. I found optic neuritis in both eyes. There was no effusion in the vitreous in this case, and the inflammation of the iris was of the plastic type, so

that it was easy to get a good view of the nerve. She got better under antirheumatic treatment, with injections of pilocarpine at night. Incidentally it may be of interest to report that she made the mistake of taking atropine internally instead of putting it into the eye. She took about one tenth grain internally; it made her unconscious, but there were no serious symptoms.

In regard to the throat ailments that are sequences of rheumatism, I do not think there is any question but that quinsy is due to rheumatism. We all see cases having muscular pains and quinsy at the same time; and it hardly seems probable to me that the rheumatic pains are due to septic infection. We all see cases in which the throat shows no local disease, except at times a little redness and dryness, and yet the patients complain of a great deal of pain in swallowing. I seldom see rheumatic inflammation of the middle ear. Rheumatic inflammation of the larynx is less common than of the eye or the ear.

Dr. John L. Howard: With respect to the throat affection known as quinsy, I think bacteriologists are unanimously of the opinion that it is due to infection by staphylococcus or streptococcus. We know that both forms exist in the mouth almost constantly, especially if there be any disease of the oral or pharyngeal cavity. It is possible that rheumatic inflammation may bring about a state favorable to their development. Salicylates may remove the symptoms to a certain extent, but this does not prove that the disease is rheumatism.

Dr. Cottell: The specialists have given us valuable information as to the nature of so-called rheumatic affections of the throat. Rheumatism is a disease which attacks fibrous tissue and is non-suppurative. Tonsillitis is a phlegmonous inflammation and gives every evidence of being a microbic disease. Certain inflammatory conditions of the tonsil, not amounting to actual tonsillitis, I believe are rheumatic, at all events they are benefited by the salicylates. Those who have spoken to-night on the treatment of rheumatic affections have limited their remarks to salicylate of sodium. I remember one case in which there were no signs of improvement under salicylate of sodium that very promptly got better under salicylate of quinine. Some years ago Dr. MacLagan wrote a very valuable monograph on rheumatism in which he claimed that there was in many cases a malarial element. A favorite combination of mine is salicylic acid and acetate of potassium. I have had some experience with salicylates in rheumatic disease of the eye; and in one case, which Dr. Dabney will

recall, we had quite brilliant results by saturating the system with salicylic acid and acetate of potassium.

Dr. Ray: We see many forms of eye inflammation in which the etiology is doubtful, and, not being able to find any satisfactory explanation, we call them rheumatic. We do not often find the eye involved in acute rheumatism; it is in the chronic form. As to the parts of the eye involved, it has been my experience to see inflammation of the episcleral tissues very frequently. The form of iritis encountered in rheumatism is, in my experience, plastic. I have always found some cause in the serous form of iritis.

As to the influence which antirheumatic treatment has upon these various forms of eye inflammation, I have gotten in the habit of calling all cases of episcleritis rheumatic, unless there is some other cause for it. Salicylate of soda does not cure them; it lessens the pains and relieves them to a certain extent. They are often fugitive and relapsing. I am skeptical on the quinsy question. I see many cases of quinsy in which there is a rheumatic history. If quinsy is rheumatic, it does not follow the course of rheumatism involving other parts of the body; there may be extensive involvement of the joints in rheumatism, yet it is very seldom that there is any formation of pus. There is a peculiar redness of the throat which many describe as rheumatic sore throat, but in many of these cases we fail to get a history of rheumatism. Salicylate of soda relieves them through its analgesic effect, and not through its antirheumatic effect. I think we call many of these cases rheumatic because we have no other explanation for them.

Dr. Cheatham: Some of the gentlemen seem to be careless about their pathology, and look upon all forms of tonsillitis as suppurative. You may take a hundred cases, and there will not be more than five or six in which there is formation of pus; the others will be lacunar or follicular tonsillitis. Quinsy is a peritonsillar inflammation. I have seen many cases of rheumatism of the throat lately in which there was no redness whatever, the symptoms being pain and tenderness. I use salophen in five-grain doses, with strychnine $\frac{1}{16}$ grain, two, three, or four times a day. I am rheumatic, and, if I eat fruits of any kind or sweets for two or three days, I will have a follicular tonsillitis, which I will relieve by active purgation. I agree with one of the speakers in regard to active purgation. These cases have their cause in the intestinal tract; clean that out thoroughly, then give quinine or some of the salicylates, with an alkaline gargle.

JOHN L. HOWARD, M. D. *Secretary.*

Reviews and Bibliography.

Medical Jurisprudence, Forensic Medicine, and Toxicology. By R. A. WITTHAUS, A. M., M. D., Professor of Chemistry, Physics, and Hygiene in the University of New York, etc. With the collaboration of August Becker, Esq., Charles A. Barton, Esq., Hon. Goodwin Brown, W. N. Ballard, M. D., G. C. Cameron, M. D., J. Clifton Edgar, M. D., G. J. Edwards, Esq., E. D. Fisher, M. D., J. C. Johnson, M. D., D. S. Lamb, M. D., H. P. Loomis, M. D., David Murray, Esq., W. B. Outten, M. D., Roswell Park, M. D., W. T. Parker, M. D., J. Parmenter, M. D., Hon. Wm. A. Poste, Irving C. Rosse, M. D., E. V. Stoddard, M. D., Edward S. Wood, M. D., George Woolsey, M. D., J. H. Woodward, M. D. Volume 3. 697 pp. New York: William Wood & Company. 1896.

The contents of this volume embrace the medico-legal relations of vision and audition, and of injuries to the eye and ear; the medico-legal aspect of insurance; insanity in its relations to medical jurisprudence; mental unsoundness in its legal relations, and the care and custody of incompetent persons and their estates. If any physician has persuaded himself that legal medicine is of small moment he has but to peruse the pages of this volume, however cursorily, to have his delusion completely dispelled. No other work in the English language attempts the elucidation of the subject in the fullness with which it is here treated.

The style of this volume strikes us as being also an improvement on the first two, excellent as they appeared. It is to be regretted that the publishers have not seen their way to a more artistic character of illustrations to accompany the work, for it certainly deserves something in the way of high art to keep pace with the text.

The student of to-day must indeed be hard to please who finds any thing to complain of in the way of treatises on medical jurisprudence. D. T. S.

A Treatise on the Medical and Surgical Diseases of Infancy and Childhood. By J. LEWIS SMITH, M. D., Clinical Professor of Diseases of Children, Bellevue Hospital Medical College; Physician to the Charity Hospital, etc. Eighth edition. Thoroughly revised and greatly enlarged, with two hundred and seventy-three illustrations and four plates. 987 pp. Philadelphia: Lea Brothers & Co. 1896.

The nineteenth century bids fair to close on this great contribution to medical science as the best work on diseases of children in any language. To keep pace with the advances recently made in the knowledge of the etiology, pathology, and therapeutic requirements of the diseases of children, a large part of the book has been rewritten, and new chapters have been found necessary to cover the extended range the subject has been found to require. A feature that has been subjected to especially marked develop-

gives the impress of authority and the assurance of clearness and point to whatever emanates from his pen. The dedication is made by the author to his son-in-law and co-laborer, Dr. Frederic M. Warner, whose lamented and untimely death occurred from typhoid fever just at the time the proofs of what he had written were coming in from the printer. D. T. S.

Principles of Surgery. By N. SENN, M. D., Ph.D., LL. D., Professor of Practice of Surgery and Clinical Surgery in Rush Medical College, Chicago; Professor of Surgery in the Chicago Polyclinic; Attending Surgeon to the Presbyterian Hospital; Surgeon-in-Chief to St. Joseph's Hospital; ex-President American Surgical Association, etc. Second edition, thoroughly revised. Illustrated with one hundred and seventy-eight wood engravings and five colored plates. Royal octavo, xvi, 656 pp. Extra cloth, \$4.50 net; sheep or half-russia, \$5.50 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

Five years ago the first edition of this work appeared, and while it appeared to many not to present the all-round fullness that a class text-book is expected by most teachers to possess, yet the great learning, originality, and high class of thought it manifested gave it at once a high rank among surgical authorities.

The addition to this of all notable advances in pathology and the supply of several deficiencies of the first edition place this work well abreast of the times.

The work is still incomplete except in connection with the author's great work on "The Pathology and Surgical Treatment of Tumors." Like all of Dr. Senn's productions, it not only teaches to do and to know, but also incites to investigation and teaches to think. D. T. S.

Infantile Mortality during Childbirth and its Prevention. By A. BROTHERS, D. S., M. D., Visiting Gynecologist to Beth Israel Hospital, New York, etc.; being the William Furness Jenks' Prize Essay of the College of Physicians of Philadelphia. 179 pp. Price, \$1.50. Philadelphia: P. Blakiston, Son & Co. 1896.

To the student who has carefully availed himself of the teachings of any of the high-class text-books of obstetrics there is not a great deal in this work that will reward perusal. The style leaves something to be desired, though it is clear; as to facts, they appear to have been exhaustively collected, and the author's opinions will not fail to find support among some of the conflicting views of leading authorities. But it is an exceedingly rare thing that an essay of passing worth is willing to await the offering of a prize.

Diet in Sickness and in Health. By MRS. ERENEST HART, formerly student of the Faculty of Medicine of Paris, and of the London School of Medicine for Women, etc. With an introduction by SIR HENRY THOMPSON, F. R. C. S., M. B., London. 219 pp. London: The Scientific Press. Philadelphia: W. B. Saunders. 1895.

The language of the introduction to this work by Sir Henry Thompson supplies the most appropriate characterization. "I do not hesitate," says that eminent authority, "to express my opinion that the present volume

forms a hand-book to the subject, thus briefly set forth in these few lines, which will not only interest the dietetic student, but offer him within its widest compass a more complete epitome thereof than any work which has yet come under my notice. It is so because its accomplished authoress has the advantage of possessing not only a remarkable acquaintance with the various branches of medical knowledge, after many years devoted to their study, but also in no less degree that which has been conferred by long culinary and housewifery experience."

D. T. S.

Obstetric Accidents, Emergencies, and Operations. By L. CH. BOISLINIERE, A. M., M. D., LL. D., late Emeritus Professor of Obstetrics in the St. Louis Medical College, etc. Profusely illustrated. 381 pp. Price, \$2. Philadelphia: W. B. Saunders. 1896.

Out of a very large experience, extending through nearly half a century, the author gives us in this little volume the history of a large number of obstetric accidents, the causes which lead up to them, and the treatment deemed by him the most appropriate.

The work affords very interesting reading and supplies assistance in the emergencies described, which, though mostly rare, may fall to the lot of any practitioner. It must be confessed also that the work contains not a little that is better set forth in any of the classic obstetric text-books. D. T. S.

Tenth Annual Report of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania. Clarence M. Busch, State Printer of Pennsylvania. 1895.

This report comes in the elaborate form becoming the opulent Keystone State, and contains much that is of more than local interest. Among these is an account of the breaking out of typhoid fever in a company of Pennsylvania troops that was encamped at Gettysburg in 1894. Out of fifty-three enlisted men there occurred twenty-two cases of fever. It was traced to a walking case of typhoid fever in the camp, the patient having handled the food of his comrades.

D. T. S.

Twenty-first Annual Report of the Secretary of the State of Michigan for the Fiscal Year Ending June 30, 1895. Lansing: Robert Smith & Co., State Printers and Binders. 1895.

Two States stand out pre-eminent in sanitary work and the promotion of medical education. These are Illinois, always first, and Michigan, under the lead of Dr. Vaughan, easily second. In this report the work of Dr. Vaughan does not appear so conspicuous, but his example is well emulated and his successors have maintained the credit of the State for thorough sanitary work.

Coca and Its Therapeutic Application. By ANGELE MARIANI. With illustrations. Third edition. New York: J. N. Jaras. 1896.

This, though really an advertisement, is an exhaustive and instructive exposition of the preparation and action of coca and its derivatives.

Foreign Correspondence.

LONDON LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

The Public Health; Japanese Sailors and First Help; Treatment of Smallpox; Dr. Farquharson on Alcohol; Meeting of Royal College of Surgeons; Rapid Consultations; Smallpox Epidemic at Gloucester.

The mortality statistics of the thirty-three great towns of England show that it is many years since the first quarter of a year has been so healthy. Since influenza first appeared, toward the end of 1889, weekly rates of from 30 to 50 per 1,000 have often been reported, and in one instance, in the case of Sheffield, it rose as high as 70.5. During the past three months there have been only two instances as high as 30, and rates above 25 have been uncommon. The whole population being over 10,000,000, there has not been a single week in which the rate has been as high as 21, and only five in all have touched 20, the annual rate for the thirteen weeks being 19.5. Croydon has the lowest death-rate for the quarter, 14.4; Cardiff taking second place with 15.4. As usual the greatest mortality was in the Lancashire towns, Preston, Bolton, Manchester, Salford, and Liverpool, with rates from 22 to 24. In London there were during the thirteen weeks 21,169 deaths, no less than 4,590 below the corrected average, the death-rate being 19.5. London still shows a prevalence of some of the zymotic diseases; taking the class as a whole, there have been 3,586 deaths, more than 1,000 in excess of the average; measles caused more than double the usual number of deaths, the total of 1,384, being an excess of 780. Diphtheria also year by year shows an increase in the number of deaths.

The Japanese Minister a few days since presented St. John's Ambulance certificates to nine Japanese and six British sailors for proficiency in rendering first aid to the injured at the Missions to Seamen Institute, Poplar. About four hundred sailors were present, including seventy Japanese. In the course of the evening the Japanese sailors gave exhibitions of swordsmanship and of wrestling, as well of their dexterity in bandaging imaginary patients.

The Historical Manuscripts Commissioners have recently printed a receipt for curing smallpox, the original of which is preserved among the manuscripts of the Duke of Portland at Welbeck Abbey. It appears that in 1660 it was generally reported that "His Highness, the Duke of York (afterward James II), is by God's almighty hand visited with smallpox," whereupon Dr. Wildey, an eminent physician of Rotterdam, sent his advice respecting treatment to the king: "Take," he wrote, "new laid eggs, three

yolkes and whites; fry them in fresh butter that was never salted, twelve ounces, till the eggs be very hard. Then pour the butter from the eggs into a bason full of fayre cold water. Let it stand till the butter be cold and caked; then take it from the water and put it into a fayre vessel and beat it with a wooden spatter continually, adding three or four drops of damask rosewater, till the butter with beating come to be white." The unguent was to be given every three hours, "the quantity of a nutmeg upon a knife point." This would cure the smallpox. For the sleeplessness, Dr. Wildey prescribed: "Now, if it pleases God that His Royal Highness, the Duc of York, can not sleep, let a live pidgeon be slitt in two and one half be applied so soone as it is spiltt to the sole of one foot and the other half to the sole of the other foot, fast bound with towlers, and so remaine twenty-four hours. By God's help that will procure sleep and extract the venomous quality of the disease from the heart and vitall spirits."

At the last meeting of the Society for the Study of Inebriety Dr. Farquharson said he could not quite agree with what he had heard about the harmful action of alcohol. If alcohol was not actually a food, it enabled other foods to be more effective and to go further. The balance of argument went to show that alcohol fulfilled some nutritive function in the human body, and it was very remarkable that the great numbers of people on the globe took alcoholic stimulants. All the dominant races were "drinking" races; and races that did not "drink" were easily subdued. He was sure of one thing—that alcohol kept people quiet. Some of his teetotal friends, especially in the House of Commons, were much too energetic, and he thought if they took a little alcohol now and then it would keep them quiet and prevent them from wearing themselves out.

A memorial with nearly twelve thousand signatures attached has been prescribed to the Home Secretary, stating that the petitioners had reason to believe that the amount of actual inspection and consequent control, under the Cruelty to Animals Act of 1876, relating to vivisection, was very small, and asking him to appoint additional inspectors of independent character, not being professors in any medical school where vivisection is carried on. The memorial was prepared by the International Antivivisection Society, London.

At the quarterly meeting of the Council of the Royal College of Surgeons of England it was stated that, in connection with the grant of £1,000 from the Goldsmiths Company, two important points had been brought out by Dr. Martin's recent experiments, viz: That antitoxin, if properly prepared, is harmless when tested on animals; that in the case of patients suffering from severe diphtheria it is necessary to give much larger doses than in ordinary cases (4,000 immunization units) in order to neutralize the action of ferment toxins and albumoses. Dr. Cartwright Wood reported the result of his experiments in the rapid production of active diphtherial antitoxin. As the result of this investigation the difficulties connected with the preparation of antitoxic serum, no less than the expense, are dimin-

ished, especially as the number of horses which must be kept in order to obtain a definite quantity of antitoxic serum will probably be diminished in the ratio of about four to one, while, as four cubic centimeters will contain 1,000 units, the practice of subcutaneous injection, especially in the case of children, is rendered much easier.

The Bavarian priest, Father Kneip, who has achieved such a reputation as an amateur doctor, is reported to see patients at the rate of 180 an hour. He does not waste any time in examining them, but just asks a question or two and then goes right away into curing the individual.

The cases of smallpox at Gloucester continue to increase at the rate of between 150 and 200 fresh cases a week, while the number of deaths is also on the increase. Only one case of a person who is said to have been revaccinated before exposure to the risk of infection is known to have been admitted into the hospital, and she was vaccinated fourteen years ago. Of all the medical men, trained nurses, and attendants who have, after being revaccinated, been brought into frequent and close contact with the disease in the city since the commencement of the outbreak, not one has taken the infection. The antivaccinators continue to hold meetings, and attribute the outbreak to every thing except the right one. The prevalence of the disease is causing great distress in Gloucester, trade being at a standstill.

LONDON, April, 1896.

Abstracts and Selections.

A SPECIAL ACTION OF THE SERUM OF HIGHLY IMMUNIZED ANIMALS, AND ITS USE FOR DIAGNOSTIC AND OTHER PURPOSES.—The following is an abstract of a paper by Herbert E. Durham, communicated to the Royal Society on January 3d: (1) A remarkable series of effects are produced on an emulsion of actively motile microbes by the addition of minute quantities of potent kinds of serum. (2) These effects have been observed with the cholera vibrio, a variety of other vibrios, the typhoid bacillus, the bacillus coli communis, and the bacillus pyocyaneus. (3) It is highly improbable that the phenomena are limited to the groups and species here named. Further observation is requisite upon other motile as well as the non-motile bacteria. (4) The most prominent of the effects thus produced consists of an immediate aggregation of the bacteria into "clumps"; this is combined with loss of motility. Marked inhibition of growth also occurs. (5) The formation of clumps can be detected readily by the naked eye. Eventually they gravitate to the bottom of the tube containing them. (6) A "complete action" is obtained when all the clumps settle down, leaving a perfectly clear fluid. The time required for settling varies somewhat in different organisms, as also according to the amount and potency of the serum used. (7) The

least quantity of serum which will give a complete reaction in about one hour forms a convenient standard. A highly potent serum will react thus in one-per-cent solution, which is a convenient unit. (8) The more intense the action of the serum, the more rapid and the more complete are the changes which ensue. (9) By means of the intensity of action in varying dilutions, two or more samples of serum, or of freshly-drawn blood, may be gauged according to their potency. (10) Normal serum and the serum obtained by immunizations with totally unrelated groups of organisms do not interact upon the unrelated microbes so far as present observation shows. (11) The action of cholera serum upon more or less closely related vibrios may be "complete" or *nil*. A series of gradations in intensity of reaction has been observed with cholera serum and vibrios of other species, and *vice versa*. (12) The action of such serum can not, therefore, be regarded as "specific"; it is better named special or specialized. (13) The limit of the absolute value of such serum tests for the diagnosis of cholera vibrios has yet to be determined. (14) All the typhoid bacilli from sixteen different sources hitherto observed react with typhoid serum; none of them react with the *B. coli* serum. (15) Of the *B. coli* varieties hitherto proved some do not react with one sample of *B. coli* serum. (16) The agreement in action of the typhoid bacilli points to the use of a method for diagnostic purposes. Given a young culture and typhoid serum, diagnosis can be made in a few minutes. (17) As shown by serum experiment the variation within the *B. coli* group is greater than that of *B. typhi* races. (18) By the method described more delicate changes can be observed than with such methods as plate cultivations, and fallacies thereof are avoided. (19) A vibrio and a vibrio serum which will give a "complete reaction" *in vitro* will also give a positive result in "Pfeiffer's reaction." (20) It is not worth while performing Pfeiffer's test unless a "complete reaction" has been obtained *in vitro*. (21) In the method described the whole series of changes, if any, are before the eye the whole time. In Pfeiffer's method the changes can only be seen by removing samples from their hiding place in the guinea-pig's peritoneal cavity. The extent of possible fallacy from using the peritoneal fluid of a living animal is not yet defined. Pfeiffer himself admits that the animals vary to some extent according to their condition of health.—*British Medical Journal*.

TREATMENT OF PAIN.—Goldscheider (*Berl. klin. Woch.*, 1896, Nos. 3, 4, and 5,) discusses the subject under the (1) causal, (2) direct, and (3) indirect treatment. The first depends on the recognition of the cause, and the possibility of dealing with it. The pain may depend on genuine disease of the nervous system, or on some pathological change in other tissues. In the latter case the treatment of the pain is of secondary consideration to that of the original disease. In disease of the nervous system the pain may be the chief and even the pathognomonic symptom of the disease, as in neuralgia and various neuroses. Often the causal treatment is impracticable.

Sometimes after the removal of the cause the pain persists; it is then a psychical phenomenon. Under the direct treatment the following are to be considered: (a) Agents which lessen the increased excitability of the nerves, brain, etc., such as nervine tonics, hypnotics, cold, electricity, etc. Narcotics, and especially morphine, are to be avoided, particularly in chronic diseases. Bromides do not suffice of themselves to allay pain, but they are very useful when pain is due to increased excitability of the nervous system. The permanent use of antineuralgic agents is to be avoided. The local application of cold for the relief of pain is often useful, especially in affections not deeply seated. The author has not been able to convince himself of the value of the anode in allaying pain. (b) Counter-irritants are among the most useful means in dealing with pain, not only in neurasthenical but also in genuine pain. (c) The question of alteration in vascular supply is hypothetical, but venesection, cool or warm applications, and other hydrotherapeutic measures are certainly useful. The effect may be in some measure due to suggestion. (d) Under massage and treatment by movement, the author says that the value of passive and active motion is still much underestimated. In some cases of sciatica, painful joints after injuries, there is no better treatment. (e) Under psychical treatment, suggestion and hypnosis are discussed. This is treated of under the following heads: (1) An effect is aimed at by producing the corresponding or co-related sensation. Thus passive movements in cases of paralysis engender corresponding sensations. In this way many of the results obtained by suggestion, electricity, massage, etc., are to be explained. The substitution of an artificial for a spontaneous pain is a similar example. (2) An effect is aimed at by the artificial production of an idea by verbal suggestion. For example, it is suggested that a pain should disappear, etc. (3) Ideas are called forth which are intended to influence the will. The first method is perfectly legitimate, and is based on physiological principles. The second is of special interest, as it contains the limit of suggestion which is and is not allowable. It may be proper enough to suggest that an indifferent draught will produce sleep, but when delusive ideas and sensations are suggested, it becomes a different matter. The author makes damaging criticisms on the third method. Under the indirect treatment the question of the general nutrition of the patient is considered.—*Ibid.*

NERVE SUTURE AND NEUROLYSIS—A. Wölfler (*Prag. med. Woch.*, 1895, Nos. 47 and 48; *Centbl. f. Chir.*, Feb. 22, 1896,) advocates suturing in cases of paralysis due to division of a nerve, no matter whether the injury is recent or of several years' standing. It is of the greatest importance, he says, to place the sutured nerve under conditions as nearly as possible physiological by freeing it from cicatricial bands and distortions; furthermore, every effort should be made to secure union by first intention. The commonest occasion for neurolysis, or the operation of freeing a nerve from adhesions, he has found after fractures of the humerus. The first symptoms of such

adhesions are neuralgia and sensory irritation; subsequently muscular atrophy and disturbances of the nutrition of the skin occur; finally, motor affections and impaired sensibility follow. In the treatment of these cases, conservative measures should be tried at first, especially the use of electricity; if they fail, neurolysis is indicated.

He gives the following table of his results:

A. SUTURE OF NERVES.

I. IMMEDIATE SUTURE (direct union).

a. Primary.

1. The facial nerve, after injury. Perfect recovery.
2. The median and radial nerves. Perfect recovery.

b. Secondary.

3. The median nerve. Complete recovery.
4. The radial nerve. Complicated fracture. Resection. Recovery.
5. The fifth and sixth nerves of the cervical plexus. Immediate recovery.

II. MEDIATE SUTURE (indirect).

6. The radial nerve. Formation of constricting bands. Final result unknown.
7. The peroneal nerve. Nerve-grafting. The same.

B. NEUROLYSIS.

8. The peroneal nerve, after osteotomy. Recovery which has persisted for seven years.
9. The radial nerve. Fracture. Recovery.
10. The radial nerve. Exostosis. The same.

—*New York Medical Journal.*

MEDICAL IMPORTANCE OF THE KATHODE RAYS.—H. Leo (*Berl. klin. Woch.*, February 24, 1896,) discusses the probable value of Roentgen's discovery to the physician now that much has already been said of its value in surgical diagnosis. Although the trunk is too thick to allow the passage of the rays by means at present at our disposal, the apparatus producing Roentgen's rays might, as electric lamps have been, be introduced into the mouth, esophagus, stomach, vagina, or rectum. By means of Einhorn's apparatus the stomach might be reached, a Hittorff's tube being substituted for the electric lamp. Thus one might hope to discover the presence and position of biliary calculi in the liver and bile ducts. Unfortunately in this respect Kayser has shown that Roentgen's rays pass through gall-stones almost as easily as they do through the surrounding tissues. Any attempts of this sort are, however, for other reasons as yet absolutely impossible; the heat produced by the Hittorff's tube would be so great that, during its necessarily prolonged use, even a covering of circulating water would not be sufficient to prevent its excessive development; moreover, any faulty isolation of the apparatus might cause the sudden death of the patient. One can entertain the idea of being able to introduce a modified sensitive plate into one of the body cavities, the source of radiation being applied outside the body. Substances which may perhaps later be recognized within the body by the new radiation include gall-stones (an improved method would be necessary), pancreatic calculi, foreign bodies in the internal organs,

calcifications (especially in the blood-vessels, the lungs and the lymph glands), urinary calculi, and pregnancies after the second month, the time at which the first points of ossification (clavicle and lower jaw) develop in the fetus. Some new aid toward the diagnosis of stones in the kidney would be indeed welcome. Kayser has made experiments with urinary calculi of different chemical composition, and has found that they all, including the uric-acid and the cystin calculi, resist the passage of the kathode rays, and appear therefore in the Roentgen photograph.—*British Medical Journal*.

THE TREATMENT OF BURNS.—The *Lancet* for February 22d contains a report of a recent meeting of the Leeds and West Riding Medico-chirurgical Society, at which Mr. W. H. Brown read a paper on this subject. At the present day, he said, the treatment of burns was unsatisfactory. The death-rate from burns of all degrees in the Leeds Infirmary was identical with that of twenty years ago.

The causes of death were shock and septicemia, and the author recommended morphine to allay the former and to allow the parts to be carefully cleansed and dressed. To keep the patient warm and to protect the burns from the air, he advocated the continuous use of a warm bath rendered antiseptic with boric acid. He thought that carbolic acid and mercury were too easily absorbed to be used. To lessen or to prevent septicemia, he suggested that, where it was possible, after the administration of ether, the surgeon should cut or scrape away the tissue that appeared to be destroyed beyond a chance of recovery, and then apply an ordinary surgical dressing. At present, Mr. Brown said, he used eucalyptus oil, which was not toxic or irritating.

Mr. J. W. Teale stated that he had used chloroform when he applied the dressings, and thought that it decidedly lessened shock.

Mr. Pridgin Teale thought that carbolic acid combined with the sloughs and formed a kind of protecting covering which would be comparatively harmless.

Dr. Chadwick and Dr. J. B. Hall were strongly in favor of the method employed in Vienna—that of using continuous warm baths throughout the treatment.

Mr. Littlewood said that some time ago atropine had always been given to allay shock. He thought that the warm bath treatment was the best. He believed that carbolic acid was not safe for the dressing of large burns, owing to its ready absorption.—*New York Medical Journal*.

SERUM-THERAPY IN SYPHILIS.—Pellizzari (*La Clinica Moderna*, February 15, 1896,) in the course of a series of articles on the above subject, reports ten cases in which the treatment was practiced, of which the following is the first: A man, aged twenty-three, became infected with syphilis, and when seen (on July 5, 1892,) one month afterward presented two primary indurated and excavated chancres, with the usual glandular enlargements. On July

8th one half c.cm. of antisypilitic serum was injected without any local or constitutional reaction occurring. On the 10th, 11th, and 12th injections of one c.cm. were given, causing slight mental confusion and general *malaise*. Already the syphiloma began to soften slightly. Daily injections were practiced. On August 3d slight roseola appeared on the trunk. On August 18th slight transient albuminuria appeared, but passed away on the suspension of the injections. On August 24th the injections were resumed; at this date a macular eruption appeared on the trunk. By September 10th the eruption had almost disappeared; there were no fresh symptoms except the occasional presence of wandering pains in the elbow, knee, and right ankle. On October 10th all symptoms had disappeared, and the patient remained perfectly well up to the present time. During the treatment the temperature rose occasionally and the patient lost weight, but otherwise no unfavorable symptoms occurred. The patient married three months ago, and his wife shows no signs of infection.—*British Medical Journal*.

CANTHARIDIN.—Among the formulas given in a recent report of Merck's (quoted in the *Therapeutische Wochenschrift* for February 23d) are the following for the use of his "cantharidinum crystallisatum purissimum": "Cantharidin, 1 part; alcohol, 1,000 parts; distilled water, 100,000 parts." The foregoing prescription is one of Dr. Freudenberg's.

He directs a teaspoonful, diluted with water, to be taken three or four times a day in cases of cystitis. Solutions of cantharidin are not very stable; consequently, if the remedy is to be used for a considerable time, as in scrofula and tuberculosis, it is better to order it in pill form according to the following prescription: "Cantharidin, 2 milligrams (0.031 of a grain); white bole, 2 grams (30.86 grains). M. Divide into thirty pills, of which one is to be taken daily before breakfast."—*New York Medical Journal*.

THE HYPNOTIC ACTION OF SCOPOLAMINE IN THE INSANE.—The *Revue Internationale de Médecine et de Chirurgie* for February 25th contains an abstract of an article on this subject which appeared in the *Semaine Médicale*, No. 2. Two Russian physicians, M. Olderogge and M. Jurman, says the writer, made a series of experiments with the hydrobromide of scopolamine, and found that the drug possessed a true value as a hypnotic in the treatment of the insane. Administered hypodermically, in doses varying from 0.003 to 0.015 of a grain, it induced in the majority of the subjects a sleep which lasted from three to ten hours. On awakening, the patients appeared much calmer than before the administration of the drug. This effect was especially pronounced in maniacs, but it was not so marked in acute lype-mania. In chronic insanity its hypnotic action was also manifest. In delirium tremens, however, it tended only to weaken the patient, and had no hypnotic action whatever.—*Ibid.*

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNĀ."

Vol. 21.

SATURDAY, MAY 2, 1896.

No. 9.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.
JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3
per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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JOHN P. MORTON & COMPANY, Louisville, Ky.

SERO-THERAPY AD ABSURDUM.

The treatment of disease by injections into the human subject of sterilized blood-serum from immune animals does not seem to be making any great headway with the profession. Tuberculin and the euphionously christened improvements upon that sad therapeutic miscarriage, with hydrophobin, typhoidin, and the like, have gone with testiculin, cerebrin, and thyroidin to swell the list of medical fads and failures, while in the minds of perhaps a majority of physicians the efficacy of the diphtheritic antitoxin is moot is not nil. For the antitoxines there is *a priori* at least a plausible scientific reason for their alleged action; but the visceral juices never had any thing but empiricism for their employment, while imagination seems to have produced their marvelous effects.

When Robert Koch, under the unwise influence of Virchow, prematurely sprung his idea of treating disease through the by-products of bacterial growth, he might have said with Tennyson:

"Read my little fable:
He that runs may read—
Most can raise the flowers now,
Since all have got the seed."

And certainly a multitude of workers have spared no pains to enrich therapeutics (and sometimes, we fear, the workers,) upon the line

marked out by the great bacteriologist. The results, though barren in most instances, have been sufficient to encourage further efforts; and if the laborers in this field would follow the example of Koch in all his other work, to wit, not to give any thing to the public until its truth should be established by control experiments and searching tests, time, money, and fame would be most wonderfully conserved.

As might have been expected, Koch's idea has set agoing some remarkable mental processes, but we were not quite prepared for the following, which the Medical Press and Circular brings to light:

"The last suggestion in sero-therapy is the injection of the blood-serum of dogs which have been subjected to large daily doses of ethylic alcohol. According to Dr. Toulouse, the injection of twenty-four cubic centimeters, thrice repeated, of this serum, produced markedly beneficial effects in a case of alcoholic delirium. He is now about to institute researches with the object of finding out whether the serum acts as an 'anti-alcoholic' serum, or merely *qua* serum. It would, perhaps, have been more in accordance with scientific principles if he had made his control experiments before taking up the time of the Academy of Medicine, of Paris, with an observation which is calculated to bring sero-therapy into contempt."

If Dr. Toulouse is not already a homeopathist, he had better lose no time connecting himself with the brethren of the "*similia similibus*" and "high potencies."

Notes and Queries.

To the Editors of the American Practitioner and News:

I inclose herewith a copy of letter which I am sending to the medical directors of the chief life insurance companies in this country, and to the leading medical journals. The importance of this subject will, I hope, entitle it to space in your columns.

ST. LOUIS, Mo., April 20, 1896.

HOWARD CARTER, M. D.,
Milk Inspector.

TO THE CHIEF MEDICAL DIRECTORS OF LIFE INSURANCE COMPANIES. We are convinced that the great prevalence of tuberculosis among dairy cattle, and the transmission of infection to human beings through the meat and especially through the milk of such animals, is not second in importance to any question confronting the intelligent medical men of the day.

I have demonstrated the presence of the bacillus tuberculosis not only in the lesions and pus but in the milk of cows apparently healthy, which reacted to the tuberculine test, establishing the identity of bovine with human tuberculosis, and confirming the examination reported by Drs. Salmon and Smith, of the United States Department of Agriculture, and others.

I am not aware that this aspect of the subject has been at any time brought to the attention of life insurance companies. Its direct bearing upon the public health, and consequently upon the death-rate, should commend it to them especially as a problem the practical solution of which would result in a saving of thousands of human lives and of millions of dollars annually. Not only would the death-rate be reduced, but an improved vitality would be developed in coming generations by avoidance of the entry into the system of toxic germs, which, if they do not directly lead to conditions resulting in death, may lay dormant until the general vitality is sufficiently lowered to permit their full development.

In bringing this matter to your attention I desire to request an energetic and persistent demand from the medical profession in general, and from the directors of life insurance companies in particular, for the enactment of protective legislation, protection that *will* protect and benefit our whole people and diminish the ravages of this most insidious and dreaded enemy of the human race.

POLYPOUS NEW GROWTHS OF THE LEFT AURICLE.—Pavlovsky (*Sonderabdruck aus der Berlin. klin. Wochenschr.*, 1895, No. 18,) calls attention to the extreme rarity of new growths of the heart. Those reported have been of various kinds and in various positions, so that no general conclusions can be drawn as regards symptomatology. Generally they are latent or simulate

other lesions. The author selects the group of polypi of the left auricle for analysis, and relates a case of his own. Female, aged fifty-five, six months before admission to hospital began to suffer from palpitation; later dyspnea, cough, and weakness came on, and she died a month after admission of weakness and profuse hemoptysis. *Post-mortem* the heart was hypertrophied. On the posterior wall of the left auricle was a lobulated myxoma eight centimeters long and six centimeters wide, freely movable on a pedicle two centimeters long. On placing the heart in a vertical position the lower end of the tumor protruded into the left ventricle, blocking up the auriculo-ventricular orifice. Both auricles and ventricles dilated, valves healthy. Hemorrhagic nodules in each lung. Liver and spleen congested and enlarged; stellate cicatrices on the surface of kidneys. Amount of cerebro-spinal fluid increased, especially at the basis cerebri and in the ventricles; brain substance edematous. The symptoms observed during life were, in the recumbent position, those of mitral regurgitation (soft systolic murmur at apex), but when sitting up those of mitral stenosis (the systolic murmur) disappeared, but it is not noted whether a presystolic took its place. The pulse was small and frequent. Eleven days after admission (1) changing and temporary pareses appeared—for example, diplopia, facial paralysis first on left then on right side, deviation of tongue and uvula to left; and (2) attacks of palpitation with feelings of suffocation, dyspnea, sweating, and temporary loss of consciousness, which were probably due to impaction of the tumor in the auriculo-ventricular orifice. She absolutely refused to sit up from an instinctive fear of sudden death. Her spirits were very varying, perhaps on account of circulatory changes caused by the altering position of the growth. The author has collected ten other cases of polypi in this position (three fibromata, seven myxomata or myxo-sarcomata). They are found about equally in the two sexes, and do not appear to shorten life, at least in women. Contrary to what might have been expected from the mechanical action of the polypi, none seem to have presented any such characteristic symptoms as those in the author's case, and only general symptoms of morbis cordis were noted, so that none were diagnosed. A small pulse was present in all. The *post-mortem* appearances, such as the amount of fluid in the pericardium, the size of the heart, etc., were so various that no conclusions could be drawn from them. In six of the eleven recorded cases the tumor protruded into the left ventricle.—*British Medical Journal*.

GUAIAIC RESIN AS A PURGATIVE.—This is the subject of an article by

that it acted upon the liver and the intestines, and that when he took it before breakfast it acted rapidly and without difficulty on the bowels. Dr. Murrell had then prescribed this remedy for other patients who were of a bilious temperament and suffered from constipation, and found that the results were satisfactory. He recommended the following formula: "Guaiac resin, 8 grains; honey, 45 grains."

For the past two years, says the author, Dr. Murrell has used this drug not only as a purgative, but in the treatment of chronic rheumatism, sciatica, amygdalitis, dysmenorrhea, and other affections, in doses of from forty-five to ninety grains repeated three times a day. The purgative effect was very pronounced. In one case the drug produced an eruption on the arms and legs of the patient and gave rise to a violent itching, which disappeared after the use of the drug had been stopped.

Dr. Murrell's researches, says the author, seemed to show that satisfactory results might be obtained from the use of this drug as a laxative or a purgative, and, for this reason, he has concluded to make experimental researches in this direction. For several years therefore he studied the effects of the drug and obtained results which, he says, are without doubt incomplete, but sufficiently convincing, he thinks, to lead him to express his opinion on the employment of guaiac. His experiments, in which he used Murrell's formula, were carried out on dogs. During this time, also, he employed the drug as a purgative with a few patients, according to Murrell's directions. Being distrustful, however, he says, of the excessive purgation that followed the ingestion of the doses, he concluded to give the drug in much smaller doses, and in the majority of cases of chronic rheumatism, bronchitis, arterio-sclerosis, and other affections in which constipation was temporary, the desired results were obtained with the use of thirty grains a day, but in rebellious constipation these doses had no influence whatever, and, as he did not think it prudent to give more than thirty grains a day, he made no attempt to combat chronic constipation with larger doses. M. Combemale's conclusions, drawn from his clinical experiments, as well as from those carried out on dogs, have shown him, he says, that no benefit accrues from the use of this drug as a purgative, and that he has seen only the dangers that may arise from its employment.—*New York Medical Jour.*

RESECTION OF VAS DEFERENS FOR PROSTATIC HYPERTROPHY.—Routier (*Méd. Mod.*, No. 14, 1896,) reports three cases of resection of the vas deferens for enlarged prostate, the results of which confirm the latest view that in the treatment of this condition occlusion of the cord, whether total or partial, is just as effectual and less objectionable than removal of the testes. The author exposes the cord by a vertical incision made in the upper part of the scrotum, and after separation of the vas deferens from the blood-vessels, applies two ligatures and resects the intervening portion—about one inch in length—of this duct. Simple constriction of the vas deferens by a ligature, it has been found, is usually followed by restoration

of its continuity. There are, the author states, two typical forms of enlarged prostate, one in which the gland is very firm and indurated, and the other in which it is enormously swollen and soft and elastic. It is only in the latter form, which is probably due for the most part to congestion, that operative treatment affords a good prospect of success. The fact that the patient is much relieved immediately or very soon after the operation, indicates that the treatment acts by modifying the blood supply to the testes rather than by effecting any direct change in the structure of the enlarged organs. Lauenstein (*Centralbl. f. Chir.* No. 7, 1896,) simplifies still further the operative treatment of enlarged prostate, and reduces it to a bloodless and absolutely safe procedure. This surgeon, relying on the fact that traumatic and accidental division of the vas deferens invariably results in loss of the continuity and functions of this canal; and on the success that has attended resection of a portion of the duct in cases of prostatic hypertrophy treated by Helferich and others, advocates as a plan of simplifying this operative treatment section of the vas deferens on both sides by the subcutaneous method. The duct, he has found by frequent observation on living subjects, can be readily detached from the other elements of the cord and brought into close contact with the skin of the scrotum.—*British Medical Journal*.

BIRTH THROUGH CENTRAL RUPTURE OF PERINEUM.—Sitzinsky (*Centralbl. f. Gynäk.*) reports a labor with this rare complication. The mother was a primipara aged twenty-six. The membranes ruptured eleven hours after the beginning of labor, then the head, presenting in the first position, bore down on the perineum. After a time the midwife made an incision on each side, about a third of an inch deep. In protecting the perineum with the hand she felt something like a hemorrhoid protruding, but on inspection it proved to be the nose and part of the face of the fetus. A pain followed, and the whole head was delivered through the same opening, which was seen to be behind the unlacerated posterior commissure and in front of the anal ring. The body came out during the next pain, twelve hours from the beginning of labor. Ten minutes later the after-birth was expelled through the same unnatural aperture. The child was a male, weighing eight pounds, and measuring nearly twenty inches. The mother's perineum was examined; a large rent, actually wider than the vulvular cleft, was seen. The anal ring and rectum were not involved. The posterior commissure formed a bridge of flesh not an inch broad when gently stretched. The tissues bounding the rent were badly bruised, and the posterior vaginal column remained untorn, so that there were two openings in the vagina leading to the unnatural canal in the perineum. There was also laceration of the valve close behind the urinary meatus. The perineal rent was closed directly after labor, the bruised tissues being first trimmed away; but a second perineorrhaphy was required a fortnight later, and ultimately a small vagino-perineal fistula remained.—*Ibid.*

RELATION OF DIABETES TO CHANGES IN THE PANCREAS.—Kasahara (*Virchow's Archiv*, January, 1896,) points out the necessity of ascertaining the changes in the pancreas in diseases other than diabetes, in order that a proper value may be attached to those changes which have been supposed to bear some relation to diabetes. For this purpose he records the results of examinations of eighty-three cases. Atrophic changes in the pancreas were not found in the general cachexia, which in many diseases is associated with atrophic changes in the liver and other organs, but were found in two cases of diabetes. Increase of connective tissue, constituting an interstitial pancreatitis, was found in four cases of syphilis, in three cases of arteriosclerosis, and in one of alcoholism; and similar change was found in four cases associated with fibrosis of the liver, syphilis and alcoholism being absent. Such fibrosis of the pancreas, therefore, can hardly be accepted as a cause of diabetes, and this was particularly evident in children in whom the pancreas was found to contain markedly more connective tissue than in adults, the fibrosis being apparently physiological rather than pathological.—*British Medical Journal*.

SERUM TREATMENT OF TYPHOID FEVER.—Börger (*Deut. med. Woch.*, No. 9, 1896,) has employed the serum of an immunized sheep, prepared by Beumer and Peiper, in the treatment of twelve cases of typhoid fever. He did not obtain positive results. It is thought probable that some beneficial influence was exercised in four cases. Of these two were slight, and two were of medium severity. The injections were made in these cases on the sixth, seventh, eighth and ninth days respectively, and the patients became afebrile on the eleventh, seventeenth, eighteenth, and nineteenth days of the attack respectively. In the cases in which no influence on the course of the disease could be detected, the injections were made on the eighth, ninth (two cases), tenth, thirteenth, fourteenth (two cases), sixteenth, and eighteenth days of the attack. Two of these cases were severe and one slight. The rest were of medium severity. Börger thinks that it may be said with confidence that the injections, if they do not have a favorable, at least have no injurious effect. He points out that the favorable influence was noticed only in cases in which the injections were made early.—*Ibid*.

TO THE MEMBERS OF THE MEDICAL PROFESSION.—My two collective reports on Ice-cold Applications in Acute Pneumonia, already published, give a record of one hundred and ninety-five cases so treated, with seven deaths, or a mortality-rate of 3.58 per cent. Being desirous of making as full a report as possible on this subject, I take the liberty of asking those who have tested this measure to kindly give me the result of their experience. Full credit will be given to each correspondent in the report which I hope to publish. Blanks for the report of cases will be furnished by me on application.

May 1, 1896.

THOMAS J. HAYS, M. D.,
1829 Spruce Street, Philadelphia.

Special Notices.

I MUST say that I was more impressed with the way you introduce your Hypophos. Comp. than with the virtues of it, but "as the proof of the pudding is in chewing the string," I determined to give it a trial, and can firmly say that I am a convert to "McArthur." Here is a case which has been the means of showing me that "McArthur is *in* it": Earl H., boy, October 13th, scrofulous makeup. January 15, 1895, fell into tub of boiling water, both legs being badly scalded. Skin and subcutaneous tissue wholly destroyed. Dressed antiseptically, and after sloughing had been completed, skin grafts tried—no effect. Glands in neck and groin greatly enlarged. February 14th given Syr. Hypophos. Comp., and can say that boy's health has greatly improved; has gained in weight. Glands have reduced, and on March 17th, when grafting was again tried, skin grew well, and to-day, April 20th, there is only one spot, about the size of a silver dollar, on the outer and middle third of leg, which will soon be covered. Evidently this case needed the lime and soda that were given him, and I shall continue to use it when occasion demands. Certainly, "One swallow does not make a summer," but it is pleasing to see that one in season. I would write a few more lines, but space is limited. Yours truly, L. G. HANLEY, A. M., M. D., Medical Examiner Niagara University, late Surgeon to Emergency and Sisters' Hospitals, Physician in charge of St. John's Protectory, West Seneca, N. Y.

BUFFALO, N. Y., April 20, 1895.

W. IRVING HYSLOP, M. D., 4408 Chestnut Street, West Philadelphia, Pa., says: "I have used Celerina quite largely, both in private and hospital practice, and with gratifying results. It is void of repugnant taste, and is readily retained by the stomach. My experience with Celerina has been confined chiefly to its use in nervous diseases, particularly loss of nerve power, and the opium habit, in which conditions it has served me well, and I shall continue to prescribe it, both in private and hospital practice.

PEACOCK'S Chionia has acted so nicely in my hands that I am constantly prescribing it in cases of hepatic torpor, biliousness, and all diseases caused by a deranged hepatic condition.

ARTHUR W. JOHNSON, M. D.

MECHANICSVILLE, N. Y.

IF YOU want an absolutely pure quinine sulphate, in light, flocculent crystals, the finest and best made—specify *Boehringer's*.

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THE AMERICAN PRACTITIONER AND NEWS

"*NEC TENUI PENNĀ.*"

VOL. XXI.

LOUISVILLE, KY., MAY 16, 1896.

NO. 10.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—*RUSKIN.*

Original Articles.

THE HIPPOCRATIC OATH.*

BY W. SYMINGTON BROWN, M. D.

The recent trial in London—Kitson v. Playfair and wife—opens up a serious question for the medical profession to answer, viz: Is a physician justified, under any circumstances, in revealing a secret confided to him?

The defendant, Dr. William S. Playfair, is professor of obstetrics in King's College, London, with a lucrative practice in fashionable circles; and the jury awarded the plaintiff, Mrs. Kitson, damages, amounting to \$60,000, for betraying a professional secret. The circumstances are briefly these: Mrs. Kitson is an Australian, wife of Mr. Arthur Kitson—the husband's moral reputation being rather below par. At all events his wife, after bearing two children, has had four or five miscarriages, and has been under some doctor's care most of the time since her marriage. Toward the end of 1892 she came to England alone. Latterly she was attended in London by Dr. Williams, who called Dr. Playfair in consultation. On February 23, 1894, she was placed under chloroform and examined by both practitioners.

During the legal trial Dr. Playfair testified that "he found the neck of the womb dilated to the size of a five-shilling piece." He found a spongy mass inside, which "he at first took to be an intra-uterine cancerous growth. The mass was not growing from the interior of the

* Read before the Gynecological Society of Boston, May 14, 1896.

womb, and it was easily scooped out and removed. On removing the mass he specially examined it, and found it to be a small portion of fresh placental tissue of a spongy consistence and containing fresh blood in its interstices. He said to Dr. Williams, "She must certainly have had a recent miscarriage; the mass removed was not a blighted ovum."

This last remark referred to a statement by Dr. Spencer, Professor of Midwifery in University College, London, who was "of opinion that the body removed in February, 1894, might have remained in the uterus since October, 1892. What witness was shown was a piece of a dried blighted ovum."

Dr. Playfair also testified that the plaintiff had told him, prior to the operation, that she "had not menstruated since December or thereabouts, and that menstruation had always been regular." During the cross-examination Dr. Playfair stated that he "had formed an opinion adverse to the honor of the lady on February 23d, and still holds it."

I do not propose to discuss the legal aspects of this case; but there are two or three points which require to be taken into account in forming an opinion as to its medical bearings. The husband, Mr. Arthur Kitson, is a brother of Dr. Playfair's wife. The sum claimed as damages was only \$25,000, and the jury gave a verdict for \$60,000. On account of relationship Dr. Playfair made no charge for his professional services.

I do not know whether Dr. Playfair ever took the Hippocratic oath or not. Oaths (except profane ones) are going out of fashion nowadays, and with great reason. They are a remnant of barbarism. For no honest man is more likely to tell the truth after swearing to do so than before; and dishonest men do not usually stick at trifles. Here is a verbatim copy of the Hippocratic oath, taken from the Sydenham Society edition of the Works of Hippocrates:

"I swear by Apollo, the physician, and Esculapius, and Health, and All-Heal, and all the gods and goddesses, that, according to my ability and judgment, I will keep this oath and this stipulation—to reckon on him who taught me this Art equally dear to me as my parents, to share my substance with him and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this Art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction I will impart a knowledge of the Art to my own sons and those of my teach-

ers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to any one if asked, nor suggest any such counsel; and, in like manner, I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my Art. I will not cut persons laboring under the stone, but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption; and, further, from the seduction of females or males, of freemen and slaves. Whatever, in connexion with my professional practice, or not in connexion with it, I see or hear in the life of men which ought not to be spoken of abroad I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath unviolated, may it be granted to me to enjoy life and the practice of the Art respected by all men in all times! But, should I trespass and violate this oath, may the reverse be my lot!"

The Hippocratic oath (minus its pagan and local features) is no longer administered to medical graduates; but its essential principles are as worthy of observance to-day as they ever were. Is a physician justified, under any circumstances, in revealing a secret confided to him professionally? I reply, No; emphatically, No. And there are at least two good reasons which seem to me to settle the question.

First, the uncertainty of histological and pathological evidence. Here we have two obstetricians occupying chairs in celebrated London colleges—not tyros, but experienced, talented teachers—one of whom testifies that a spongy mass removed from the uterus is a piece of fresh placental tissue, and the other that it is a piece of a blighted ovum. Since the trial a writer, in the British Medical Journal, says:

"Chorionic villi are very prominent, pretty looking objects when seen in microscopic sections; but it is not always that we can swear to them. Other structures may simulate them. Admixture with blood may partly destroy the villi and greatly modify their appearance. . . . The very nature of placenta offers great difficulties for evidence of the kind required for legal evidence."

I admit that cases occur in which the proofs of conception are decisive; but it is surely our duty, in all doubtful cases, to give our patient

the benefit of the doubt and keep the suspicion to ourselves. I think that a physician is not even justified in expressing his suspicions to a consultant; he should first be absolutely sure. A woman's moral character should not be impugned on the doubtful evidence of microscopic sections.

Second, the notorious uncertainties of the law itself. This very trial demonstrates the unreliability of legal opinions. The lawyers on both sides wriggled through a quagmire of doubt. In every case a conscientious man must make up his own mind what his duty is and be governed by that regardless of legal consequences. It would be better to go to jail for "contempt of court" than go to Coventry for betraying a patient's secret. During this trial the question was raised whether Dr. Playfair was not privileged to tell his wife as a family secret. I hold that a secret ceases to be one when told to anybody, and the last person a doctor should gossip to is his own wife.

The essence of the Hippocratic oath is embodied in the French law, which makes "the betrayal of professional confidence a punishable offense," and the law is not a dead letter. In the State of New York the law says: "No person duly authorized to practice physic or surgery shall be allowed or compelled to disclose any information which he may have acquired in attending any patient in his professional character." I am told that there is no special law anent betrayal of professional secrets in Massachusetts, but the injured party could prosecute under the common law.

In this comparatively enlightened period physicians do not need an oath to induce them to keep professional secrets. Most of them do so. If a doctor is not prompted to remain silent from a sense of honor, he is likely to do so from a sense of pocket, for a man must be a fool who habitually lets out his patient's secrets.

As far as the law is concerned, I do not see why we are not as much entitled to professional privilege as lawyers or Catholic priests. A lawyer is not compelled to divulge his client's confession, neither is a priest. I claim that our profession is as necessary to the public welfare as either law or religion—in some respects more so—and that it should be our privilege, as it is our duty, to keep the essence of the Hippocratic oath.

STONEHAM, MASS.

THREE CASES OF ATROPINE CONJUNCTIVITIS.

BY AD. O. PFINGST, M. D.

House Surgeon, New York Ophthalmic and Aurai Institute.

It is not uncommon for us to meet individuals possessed with peculiar idiosyncrasies for certain drugs or articles of food. Quite a number of examples of this peculiar neurotic constitution may be summed up, the most familiar being perhaps the appearance of urticaria after eating strawberries, lobster, etc., and the production of sneezing paroxysms by the mere presence of ipecac or other less irritating substances.

The conjunctiva, though it is not as susceptible as the mucous membrane of the nose, may also be rendered intolerant of certain drugs by virtue of an idiosyncrasy. This is particularly true of atropine, though cases have also been recorded where cocaine, eserine, and duboisine have produced inflammatory symptoms.

As atropine is at present used so extensively as a mydriatic in examining the eye, and as a sedative in inflammatory conditions, it may perhaps be of interest to know just what local effects may be expected to follow its use.

As illustrations I will briefly review three cases, which recently came under my observation, where atropine caused marked local disturbances or poisoning, if I may call it such.

The first case occurred in a woman, Mrs. B., of Elmira, New York, aged sixty-two, who had been operated upon for cataract. On the third day after the operation a one-per-cent solution of sulphate of atropine was instilled into the eye to dilate the pupil. Upon removing the bandage on the following morning, I was surprised to find both lids and surrounding tissue red and swollen, so as to cover the palpebral fissure and to prevent the patient from opening her eye. As I had not observed a similar case, it is unnecessary for me to say that I was momentarily frightened by an appearance which, at first sight, simulates the condition present in panophthalmitis. Upon inquiry the patient stated that she had suffered no pain, but that an intolerable burning and itching sensation had been present since the previous evening. Closer examination showed a clean wound and clear cornea, with little if any increase in secretion. There was no pericorneal injection. Upon informing the patient of my suspicion that the itching and swelling

again instilled and the swelling rapidly subsided. The wound in the cornea had perfectly healed.

The second case occurred in Mrs. S., aged fifty-five, who had been admitted for the extraction of a mature cataract. I report the same as one of atropine irritation, because of its close clinical resemblance to the above case, although the introduction of the drug into the eye could not be positively asserted. Knowingly there had been no atropine brought in contact with the conjunctiva. As, however, the itching began very soon after I had everted the lids to ascertain the condition of the conjunctiva, I take it there must have been a small amount of atropine on my fingers at the time. The fact that I had used atropine on another patient, just prior to the manipulation of the lids in this case adds to the feasibility of this supposition. That the drug may be accidentally carried on one's finger is evidenced by the accidental mydriases sometimes produced by rubbing our eyes after having handled atropine. This happened to me only a short time ago.

The patient in question complained of itching in her right eye soon after manipulation of her lids as before stated. On the next day there was an erythematous swelling of the lids of that side, and the patient complained of heat and of an itching sensation in the eye. The conjunctiva was somewhat injected, lachrymation perhaps somewhat increased, and the skin below the lid showed small eczematous scales. The left eye was normal.

The condition had apparently not changed on the following day, but on the third day the itching became less and the swelling began to subside. The patient was then discharged. In a week, when she returned, the eye and lids were in a perfectly normal condition.

The third case occurred in a baby five months old, which had been brought into the dispensary with an injured eye. Atropine was instilled to facilitate the examination of the interior. Shortly afterward, perhaps a half hour, the entire body of the baby was covered with a red efflorescence similar to a scarlatinous rash. There was also a swelling of the subcutaneous tissue, principally of the lids of the injured eye. The pulse was accelerated. As I did not follow the case up at the time I am unable to say how long this condition lasted. This case should perhaps be classified with the constitutional poisonings, though it is not impossible that the irritation was propagated along the subcutaneous tissue.

The irritation following the use of atropine in the eye or "atropine conjunctivitis," as it has been called, is not a new affection. The first mention which I could find of it in literature was made by Lawson, who reported a number of cases in 1869. Since this time quite a number of similar cases have been added to the literature.*

Some authors have drawn a distinction between the irritation following the prolonged use of the drug† and that produced by the use

* R. L. O. Hosp. Reports, 1869.

† Snell, Oph. Rev., Vol. I, 340.

of a small quantity. In the former the swelling is less marked and is more limited, there is a greater tendency to formation of eczematous scales, and the conjunctiva is characterized by the appearance of numerous follicles. The subjective symptoms are also less. For cases like ours, developing rapidly under acute symptoms, Dr. Edward Friedenberg* has, on account of their resemblance to erysipelas, suggested the term "pseudo-erysipelas."

The cause of the appearance of these inflammatory symptoms following the use of atropine is not definitely settled. It was by some attributed to the presence of free acid in the solution. As there could hardly be enough free acid in a single drop of an atropine solution, this improbable theory has been abandoned.

Others have, particularly of late years, tried to explain the peculiar action in a contamination of the solution with micro-organisms. This theory has also not stood the tests. In an instructive paper by Dr. Ahlstrom,† in which he enters into this subject, we see that, although a solution be perfectly free of bacteria, which according to his bacteriological experiments left the gelatine sterile, it is capable of producing the same effect upon the conjunctiva as an old solution.

His experiments also showed that from the secretion of the healthy conjunctiva the same colonies of bacteria could be cultivated as from the secretion during the atropine conjunctivitis.

If there really were bacteria in the solution to produce this effect, it seems strange that, out of a large number of patients, a single individual is affected by it. The more natural supposition, then, would be that the cause lies in the individual afflicted. Wherein this peculiarity lies that makes this person or the other susceptible to certain substances is not known. That such a susceptibility exists can not be disputed; it has long been known as an "idiosyncrasy."

The question of what to do where a patient can not tolerate atropine is not always an easy one. In the cases caused by a prolonged use of the drug a substitution of some other mydriatic may give the effect desired without irritating the conjunctiva. Hyoscyamine and duboisine in one-per-cent solutions have been used most. Sometimes a solution of tincture of belladonna will answer the purpose. In the acute cases it is best to discontinue the use of all mydriatics for a time.

* *Ophthalmic Record*, 1895.

† *Monatbl. f. augenheilkunde*, December, 1895.

A CASE OF POISONING FROM CANTHARIS VESICATORIA.

BY DRS. KEMPF AND MUELLER.

Dr. E. J. Kempf was called to see a man about thirty-eight years old, stout, well-nourished and well-built, a night watchman. The patient related to me that two or three days ago he had discovered some substance at the bottom of his coffee-cup, which upon investigation was found to be cantharides plaster.

He had also found some powder in a biscuit that had been spliced and carefully put together again. This powder seemed to be powdered cantharides. Whether he had taken any of the cantharis vesicatoria into his system, or how much, or for how long, or in what form, he was unable to state. This, therefore, could only be guessed at. He had reasons to think that a certain person had intentions to poison him.

The patient complained of pain in the epigastric and hypogastric regions and great pain over his kidneys in the back. He had difficulty in making water; he was not constipated; his tongue was coated and showed an irritative condition; he had no appetite; he could not sleep, and he seemed to be in a melancholic state of mind.

I gave him a hypodermic injection of morphine one-fourth grain to ease pain, and directed him to apply sinapisms over his back as a counter-irritation, and to drink water with the white of an egg stirred up in it. I also prescribed calomel in one-tenth grain doses till a grain was taken. A sample of the patient's urine was examined by my partner, Dr. F. M. Mueller. As I had to go away, Dr. Mueller took charge of the patient, and he will describe the continuance and end of the case.

Dr. Mueller saw the patient on the evening of the same day, and found him suffering with severe pain in the abdomen, especially in the epigastric and hypogastric regions. The pains were of a colicky nature. He had been vomiting a good deal, and had small passages from the bowels consisting of mucus; pain over the region of the kidneys, and urination infrequent and painful; priapism was absent. I left him some morphine powders to be taken as needed. This was Saturday.

On Sunday morning, 7:00 A. M., patient about the same. Temperature, 99° F.; pulse, 102; tongue coated heavily in center with a reddish

zone on the edge. Patient had not passed urine for fourteen hours, but passed about four ounces one hour later.

The urine was of a brownish-red color, acid reaction, specific gravity 1023, and a slight trace of albumin was found. Under the microscope I found in the urine a few uric-acid crystals, pus cells, red blood-corpuscles, renal and bladder epithelium.

At 7:00 P. M., bowels having moved only slightly during the day, I administered a rectal injection of one quart of water containing a tablespoonful of glycerine, with prompt relief. I left the patient a small dose of morphine to control the pain during the night.

On Monday, 7:00 A. M., I found that the patient had passed urine not so high colored as before. Bowels had moved. Patient had slept some, pains having been less. During the day he sat up and partook of some soup and light diet.

Tuesday, patient sat up all day, having no abdominal pains and only slight pain in back. Toward evening he complained of headache, for which he of his own accord and without consulting me applied a fly-blister to the nape of the neck. I told him that this was wrong, as he was already having symptoms of cantharides-poisoning, and the blister could not but add to the trouble. I cautioned him not to do any thing without my advice, and gave him a powder of antipyrine, caffeine, and bicarbonate of soda to ease the headache. A few hours afterward I was called in a hurry, the patient being worse.

A couple of hours after applying the blister the patient had clonic convulsions, which lasted for a few minutes and were followed by a fainty condition, accompanied by a cold and clammy sweat. Pulse being weak I ordered aromatic spirits of ammonia. The patient complained of pain at the base of skull, but soon fell asleep. At eleven o'clock he had a second convulsion simulating the first one. At two o'clock A. M. he had a third convulsion, which lasted only a few minutes, when the patient died.

Fourteen hours after death a *post-mortem* was held by Dr. Mueller, with the assistance of Drs. Salb and Brannock.

Over the sixth and seventh cervical vertebræ the skin was denuded of the epidermis to the extent of an inch and a half square, exposing a reddened cutis. This was caused by the fly-blister. Extending from this, about the shoulders to the skull and downward to about the fourth dorsal vertebra, there was a bluish discoloration of the skin which seemingly radiated from the blister. The dura and arachnoid

showed spots of bluish discoloration over the base of the cerebrum. The pia was reddish, especially at the base of the brain.

When cut into the cerebrum showed ecchymotic spots over the posterior portion, so also the cerebellum and the medulla. The heart and lungs were in a normal position and of a healthy appearance. Some pleuritic adhesions were seen. The liver was enlarged and congested. The gall-bladder was enlarged and contained about two drams of gall. The stomach was much inflamed, containing some partly digested food and some mucus and quite a quantity of fluid of a grayish color.

The spleen was twice its normal size and of a pulpy feel. The intestines were in an inflamed condition. The kidneys were enlarged, of a dark color, and blood oozed freely when they were cut into. The left kidney was more inflamed than the right. The bladder contained five ounces of reddish urine. Its mucous membrane was highly inflamed and injected with small blood-vessels.

Remarks: Cantharis vesicatoria is an insect commonly known as the Spanish fly. Cantharidin, the active principle, is an active and irritant poison, and is possessed of strong blistering properties. The one-hundredth of a grain of cantharidin will raise a blister on the lip. Cantharidin exists in the insect so combined with the yellow matter as to be rendered soluble in water and cold alcohol. Consequently cantharidin may have been present in the patient's coffee in a soluble form.

The symptoms of poisoning from cantharis are: A burning sensation in the mouth, throat, and pit of the stomach, great pain in swallowing, thirst, bloody stools, and vomiting of bloody mucus mixed with shining green particles (when the substance has been taken in the form of powder), priapism with inflammation and swelling of the genitals and distressing stranguary, occasionally tetanic spasms, convulsions, and delirium. Tincture cantharides is the form of cantharis generally used internally. One ounce of the tincture is considered a fatal dose, acting fatally in from twenty-four to thirty-six hours; but there are cases on record of ten days before the poisoning ended fatally.

There being no chemical or physiological antidote to cantharides, poisoning by this substance should therefore be treated on general principles.

tion. Portions of the wings and the wing-cases of the insects may be found in the stomach and detected by the microscope. Particles of the insect are more apt to be found in the large intestines, where they may be discovered for months after death.

Whether the blister used by the patient contributed to a fatal issue can only be conjectured.

JASPER, IND.

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, March 7, 1896, Dr. W. L. Rodman, President, in the chair.

Exhibition of Pathological Specimens. Dr. W. O. Roberts: The first case is an unmarried woman from whom I removed cystic ovaries last summer a year ago. The operation was attended with no special features, and she recovered, apparently without any untoward symptoms. At the time of operation she had become addicted to opium, and I thought I had broken her of the habit. She returned several times with pain in the side, but was able to get about until two months ago, when she came to me to have something done. There was distension of the abdominal wall, and owing to pain a disposition to lean forward. Digital examination gave pain on the right of the uterus. I opened the abdomen. The omentum was adherent to the cicatrix. Detaching this and going down into the pelvis I found the omentum adherent to the pedicle on the right side; the small intestine was also adherent there, and in detaching it I made a small tear in the gut. The appendix was adherent, and I removed it and a piece of omentum about as large as my hand which was adherent. She has gotten along without any trouble.

The next specimen is from a patient sent to me from the neighborhood of Mt. Sterling. She is thirty-eight years old, married, and the mother of one child. She has had complete prolapse of the uterus for seven years. I removed the entire uterus and its appendages by the vaginal method. The uterus measures exactly five inches in length. She has gotten along without any trouble.

Some months ago I exhibited to this society a patient upon whom

I had done an epicystotomy for the removal of a calculus. He has been wearing a stem ever since, which he has been introducing himself, and got along without having to pass water oftener than three or four times a day until about three months ago. Since then urination has been more frequent. I sounded the bladder through the urethra and also through the fistulous opening, but could not discover a stone. Two days ago he passed two stones through the fistulous opening, and since has not been troubled with frequent urination. I have found that this occurs quite frequently notwithstanding that the bladder may be washed out daily.

Dr. A. M. Cartledge: In these specimens the point of greatest interest is the history connected with one of them—a specimen of gall-stone. The patient was a lady forty-five years of age, whom I first saw about five weeks ago. Some time last summer she had an attack of pain which required the hypodermic use of morphine. Subsequently these attacks of pain occurred every two or three days, the trouble seeming to center about the stomach. Finally she was placed upon an absolutely milk diet for about two months; and when I saw her she was very much emaciated. I could find nothing except a little enlargement, which was movable, midway between the ensiform cartilage and the umbilicus. I advised an exploratory incision. I made this incision in the median line, believing there was some trouble with the stomach, but the stomach was empty and normal in every respect. The tumor which I felt proved to be a subperitoneal lipoma. I found the gall-bladder rather tense, small, and containing calculi. I then closed the median incision, making another in the usual position, and removed eighty or more stones. The passage of these stones was the cause of the paroxysms of pain. She has done well since the operation; and her weight has increased fifteen pounds.

In the second case, also a woman, a diagnosis was made of stone in the cystic duct, but operation was refused. About four weeks ago she had severe pain, but refused operation until a large stone lodged in the common duct. She was taken to the infirmary, and I removed thirty-two stones; some of the larger stones being made up of smaller ones glued together. In both of these cases the ordinary cholecystostomy was done and the gall-bladder stitched to the abdominal wall.

Dr. L. S. McMurtry: This subject has been so thoroughly discussed in this Society recently that it is scarcely necessary to go into it gener-

ally. But there is one point I would like to impress, and that is this: That experience justifies us in doing exploratory operations more frequently than we do now in obscure cases of pain in the epigastrium. With proper care an exploratory incision does not involve any special danger; and in the majority of such cases we will find gall-stones. I have learned a lesson from an experience with two such cases at a time when I had no idea of the frequency with which gall-stone is connected with severe paroxysmal pain in the epigastrium. In both these cases, although there was no tumor, an exploratory incision revealed stones in the gall-bladder, and the passage of these stones caused pain.

Report of Cases. Dr. T. S. Bullock: I had a few days ago a case of hemorrhage from the umbilicus several days after separation of the cord. The case was seen in consultation with a gentleman in the west end of the city, and we endeavored by every means known to us to control the bleeding, but without avail. I used Monsel's solution and also transfixed the cord, then drew a purse-string suture. Not only did it bleed from the original site but also from the needle punctures. The child was intensely jaundiced. There was no history of syphilis.

Dr. J. A. Larrabee: I have had three cases and lost them. I believe the condition of the liver in the syphilis of early life accounts for all these cases. I have made a *post-mortem* in only one of my cases. There was albuminoid degeneration of the liver to perfection; and I believe yours was such a case.

Dr. J. M. Ray: In connection with the case reported by Dr. Bullock I would like to mention that of a gentleman under my care at the present time. He has been sick since November and has evidences of disease of the liver and is jaundiced. He has persistent nose-bleed. We have succeeded in stopping the hemorrhage for perhaps a week, but if he coughs or sneezes the bleeding begins again.

Dr. A. M. Cartledge: The case reported by Dr. Bullock raises a very interesting point in pathology—the hemorrhagic condition associated with certain forms of jaundice. The experience given to-night coincides with the reports of mortality in liver surgery from repeated hemorrhages in cases with jaundice. I have had only one case of the kind—a calculus in the common duct in a woman. It was observed at the time of operation that hemorrhage was out of all proportion to

the amount of trauma and the structures attacked. She had been in profound jaundice nine months.

Dr. A. M. Vance: I have also had a death after cholecystotomy from the same cause. The patient bled from the nose, lungs, and womb.

Dr. Bullock: I have nothing further to add. The discussion was very interesting to me. I did not attach so much importance to the icterus in this case as I shall in future cases of the kind.

Dr. Roberts: I was called a few days since to see in consultation a man about thirty-five years of age who had an abscess just above the cricoid cartilage. This abscess had been opened and curetted, but had subsequently collected again and had been opened. When I saw the case there was a fistulous opening in the direction of the larynx. The attending physician had loaded a small syringe with peroxide of hydrogen and forced it into this opening. As soon as he removed the syringe a good deal of the peroxide came out, but the man felt it go across the neck and complained of intense pain on the opposite side of the neck and in the opposite ear. Later in the evening there was swelling and some difficulty in swallowing. I was called to see him about eight o'clock that evening. A little dark blood was oozing from the fistulous tract. I enlarged the opening and the man expressed himself as feeling better. By ten P. M. of same day he had grown worse; pulse was 128; there was a large swelling under the tongue; great difficulty in breathing and in swallowing, and it seemed as if the patient would suffocate. I again enlarged the fistulous opening and made an incision under the chin and in opposite side of neck, letting out a quantity of bloody serum. The swelling under the tongue has subsided, and he can now talk without difficulty.

Dr. Vance: Among the first to recommend peroxide of hydrogen in surgery was Landoldt, of Paris, who recommended it in the treatment of suppurative disease of the lachrymal sac. Several cases have been reported in which there has been extravasation of blood in the tissues of the eyelid, and in some instances the blood has found its way into the cavity of the orbit, producing atrophy of the optic nerve by pressure.

JOHN L. HOWARD, M. D., *Secretary.*

Abstracts and Selections.

ANGIOMYOPATHY.—Marinesco (*Sem. Méd.*) describes under this name a form of progressive muscular atrophy due to disease of the blood-vessels which differs from all hitherto published cases. A man, aged fifty-nine, with a neurotic family history, had enjoyed good health till he was twenty years old. Then a testis became tuberculous, but recovered. In 1865 he had an attack of melancholia. In 1885 attacks of angina pectoris began, and at the same time intermittent limping with cramps in the right calf after walking any distance. This continued two years, and his mental condition became normal. By 1887 the cramps had spread to the anterior surface of the leg and foot and to the heel. The skin over the affected part was thickened with numerous superficial veins, but no varices. Then the limping disappeared spontaneously and melancholia returned. In 1892 the intermittent limping and cramps reappeared, with progressive atrophy of the right calf muscles, the mental state again becoming normal. Gangrene of the right great toe followed. Then there was no pulse in the posterior tibial artery; all the right lower limb was cold and atrophied; sensation was normal; cutaneous and deep reflexes normal; electric excitability of muscles lessened, but no R. D. Amputation was performed in the middle third of the leg. Death occurred suddenly a month later; no *post-mortem* examination. The amputated limb was slightly edematous; muscles yellowish and gelatinous; anterior and posterior tibial arteries and the arteries of the foot were rigid cords, but there was no atheroma. Their lumen was narrowed and in places obliterated. Popliteal and posterior tibial nerves normal. Microscopically the arteries had all the signs of progressive arteritis obliterans, and there was a thrombus in the plantar artery; the veins were not thrombosed but hypertrophied. The same lesions were found in the muscular veins and arteries, the former being most affected. The intramuscular nerves were quite normal. This distinguishes this case from those published previously, where nerve—and, in Schlesinger's case, muscular—lesions occurred in the course of arteritis obliterans. The muscular fibers presented various appearances, which could be reduced to those of the different stages of coagulative necrosis—or, according to Babes, of hyaline degeneration—the coagulated parts staining deeply with aniline dyes. The final stage was the absorption of the disintegrated myosin by the proliferated nuclei of the sarcolemma—hence called “myoclasts” or “*myophages*” by the author. The muscular fibers thus disappear, their place being taken by hyperplasia of the interstitial connective tissue. This process is essentially the same as that which occurs in many other muscular atrophies, and is not peculiar to angiomypathy. Diagnosis: Intermittent limping and

pain or cramps coming on after walking for a time are characteristic of arteritis obliterans. If with this there is muscular atrophy with lessened galvanic and faradic excitability, but no R. D. and no objective sensory troubles, the disease is probably of vascular origin. Angina pectoris was present in this case and has the same etiology, namely, ischemia. Thus, the pains, cramps, muscular atrophy, angina pectoris, and cutaneous gangrene were episodes in the course of arteritis obliterans.—*British Medical Journal*.

POTASSIUM NITRATE IN THE TREATMENT OF BURNS.—In an article published in the *Revue Médicale* for February 16th the writer says that Dr. Poggi, in a recent thesis on this subject, gives an account of a treatment that has given excellent results in all kinds of burns of whatever degree. It consists in the employment of potassium nitrate, which is administered in baths or in applications of compresses that have been wet with a saturated solution of this salt, or in lotions that contain the nitrate.

According to M. Poggi the nitrate acts especially as a refrigerant. As it becomes dissolved in the water it produces a notable lowering of the temperature of the liquid of from 5° to 9° F. If a burned hand or foot is plunged into a basin of water to which a few spoonfuls of the nitrate have been added, the pain ceases rapidly; if the water becomes slightly heated, the pain returns, but it is allayed as soon as a fresh quantity of the salt is added. This bath, which is prolonged from two to three hours, may bring about the definitive disappearance of the pain and even prevent the production of blisters. The application of the compresses also exercises the same influence. By this means the pain is allayed and cicatrization takes place without delay.

Another remedy in the treatment of burns is calcined magnesia, which, says the writer, has been employed by M. Vergely, who obtained favorable results with it in burns of the first and second degree. The affected parts are covered with a thick layer of a paste which is prepared by mixing the calcined magnesia with a certain quantity of water. This paste is allowed to dry on the skin, and when it becomes detached and falls off it is replaced by a fresh application. Very soon after the paste is applied the pain ceases, and under the protective covering formed by the magnesia the wounds recover without leaving the cutaneous pigmentation which is so often observed to follow burns that have been allowed to remain exposed to the air.—*New York Medical Journal*.

BRONCHIECTASIS.—Duret (*Arch. Gén. de Méd.*) relates a case in which recovery occurred after three operations. A girl had a severe attack of whooping cough when eight years old, after which she suffered from cough and expectoration. When eighteen years old she became worse, there being fever, cough, and abundant expectoration. Three years later the cough and expectoration, which was now fetid, further increased, and dyspnea was present. The physical signs showed that the lesion was in the lower lobe

of the right lung. The largest trocar of Dieulafoy's apparatus was passed into the chest in the seventh interspace behind, and eventually thick pus with gangrenous *débris* was obtained. A flap of skin was then raised and portions of three ribs were resected. The thicker tissue now exposed was divided by the thermo-cautery until a cavity was laid open. Gangrenous material escaped. Multiple cavities were then opened up by the cautery, and it was thought that the openings of dilated bronchial tubes could be felt. After the detritus, etc., was cleared out a cavity remained of about the size of a turkey's egg. The patient expectorated about this time a most horribly offensive material. Two drainage-tubes were put in. The patient now steadily improved, and in a month's time was sent into the country. She continued to do well for four months. Later the expectoration increased, amounting to from 30 to 50 c.cm. in the day, and the general condition became worse. A second operation was therefore undertaken about nine months and a half after the first one. Some more cavities were cleared out, scraped with a Volkmann's spoon, and packed with iodoform gauze. There was troublesome vomiting after this operation. A counter opening had to be made fourteen days later below the right breast, and a large drainage-tube was passed through. The patient now began to improve again. The drainage-tubes remained in for four years. Twelve months later a cutaneo-bronchial fistula remained, and an operation was performed for its closure with success. Two years and a half afterward the patient was in excellent health. It was thought that the air penetrated into the right lower lobe, and that this part of the lung had again become permeable. Three or four times a day she had a moderate attack of coughing, with the expectoration of a clear and odorless fluid. The author thinks that this came from dilated bronchi in the neighborhood of the diseased focus. The expectoration was diminishing.—*British Medical Journal*.

ROENTGEN RAYS IN INTERNAL MEDICINE.—Huber, of Leyden's clinic (*Deut. Med. Woch.*, March 19, 1896), remarks that in the various swellings of the joints it may be impossible to ascertain by palpation whether the changes lie in the joint ends, in the cartilages, or in the soft parts. Case 1. A man, aged thirty-one, had a third attack of rheumatism. He had also had several attacks of gonorrhea, from one of which he was still suffering. The photograph showed distinctly the swelling of the soft parts about the metacarpophalangeal joints of the middle and index fingers, and also about the first phalangeal joints of the second and especially the third fingers. No change was visible in the bones. Case 2. A woman, aged forty-one, had suffered from chronic rheumatism for two years. At first it was limited to the small joints of the hands, later the elbow, shoulder, knee and ankle joints were affected. Here the photograph showed that, although the rheumatism had existed for two years, there were no anatomical changes in the bones of the hands. Under treatment she improved considerably. Case 3. A man, aged forty-nine, had suffered for three or four years from painful swellings in the

fingers, due to gout. The photograph showed lateral outgrowths and irregular thickenings in the ends of the bones. In the terminal phalanges a streaky appearance was visible, due in all probability to the deposit of lime salts. Case 4. A girl, who had a poisoned wound of her hand three months previously, had a thickening about and loss of movement in the first phalangeal joint. The photograph explained the failure of past methods of treatment and the need of surgical assistance. The last photograph was from a patient who had suffered from gout for thirty-eight years previously. It showed (a) large gouty nodules beneath the skin, and apparently in connection with the joints. These deposits of uric acid allow the rays to pass through fairly well. (b) Great changes and destruction in the joints, and (c) destruction of the bone. In the terminal phalanx of the ring finger it would appear as if there were a cavity surrounded by a thin wall only, the cavity being probably filled with uric acid. The removal of the uric acid in this case, either by absorption or otherwise, could only render a hitherto useful hand quite useless.—*Ibid.*

THE PRESYSTOLIC APEX MURMUR OF AORTIC REGURGITATION.—Fisher reports the case of a man, thirty-two years old, who gave no history of either rheumatism or syphilis. At the apex a loud rolling presystolic murmur was heard, most marked in a small area immediately around the impulse, but a duller rolling sound was heard more widely. In addition to this murmur a *bruit de galop* was audible in a somewhat unusual position below and outside the impulse. Three separate sounds were thus distinctly audible. There was no systolic murmur at the apex, but between that point and the sternum a high-pitched systolic bruit was present and heard from the fifth to the second right and left interspaces. A high-pitched diastolic murmur was heard down to the left of the sternum. Behind the sternum another murmur, loud and half-squeaking, half-musical, was sometimes noticed and was auto-audible. The pulse was regular, too, small but aortic in character.

At the autopsy the pericardium was healthy, the heart was enlarged, chiefly in the left ventricle, with but slight dilatation. The mitral valves were perfectly healthy and the orifice of normal size, measuring four inches. The tricuspid valves were also healthy, measuring four and one half inches. Immediately above the valves of the aorta the vessel was surrounded by a raised area varying in breadth from three quarters to one inch and a half. The upper border was serpiginous and the surface irregular and pouched. The aortic valves were slightly thickened, but only one, the right posterior, was deformed, and that was retroverted. The endocardium over the septum ventriculorum was greatly thickened where the regurgitant stream had impinged. Microscopic sections of the affected aorta gave evidence of active disease.

In commenting on this case Fisher quotes briefly two others where a presystolic apex murmur was noted without mitral disease, in one of which

the aortic valves were incompetent and in the other narrowed, and refers to a previous paper containing reports of cases in which the same murmur was noted without either mitral or aortic lesions, but with an adherent pericardium as the most common lesion. An explanation of these murmurs, which is applicable to all cases, is beset with many difficulties, but it is evident that there are two entirely distinct pathological conditions which will give signs simulating those of mitral stenosis, namely, disease of the aortic orifice and adherent pericardium, and it is reasonable to suppose that some condition common to both must be concerned in its production, the most obvious being a dilatation of the left ventricle which might produce a virtual stenosis even with a healthy valve. The large size of the orifice, however, in many cases of adherent pericardium excludes the possibility of such an explanation being universally applicable, while in cardiac dilatation due to Bright's disease, where a virtual stenosis probably exists, he was able to find a record of this murmur in but one case.

Another explanation is suggested by the condition sometimes seen in the *post-mortem* room, where in a dilated left ventricle the large anterior flap of the mitral valve is held taut by the columnæ carneæ and the chordæ tendineæ, which have not shared in the dilatation. During life, as the ventricle fills in diastole, the large mitral flap is held out by this state of tension in the moving blood currents and left free to vibrate instead of falling against the septum. A similar explanation has been advanced by Dr. Wilson for the diastolic murmur sometimes heard over the right heart, but it unfortunately can not apply to all cases, as the murmur is practically never heard in cases of simple dilatation. Dr. Sansom's explanation, that the regurgitant stream in aortic incompetency, by impinging on the anterior mitral flap, may set up vibrations that lead to the production of the presystolic sound is also of limited application, since in some of the cases the thickening of the endocardium of the septum ventriculorum showed that the impact of the regurgitant stream was felt there and not on the valve. Fisher suggests as one other possibility, which is common to both aortic disease and adherent pericardium, an affection of the cardiac innervation, the function of the nerves being interfered with by the presence of inflammatory products, and leading to a loss of muscular tone and the production of vibrations of the muscular walls by the inrush of blood on the contraction of the auricle. Whatever the explanation, the fact remains that mitral stenosis is not the only heart lesion that will give rise to a presystolic murmur.—*Boston Medical and Surgical Journal*.

THE SERUM TREATMENT OF PUERPERAL FEVER.—Gaulard (*Presse Méd.*) reports two cases of puerperal fever treated by injections of serum. (1) A rickety woman with a contracted pelvis had a prolonged labor on August 26th. Face presentation; perineum split to anus, but sutured at once. On September 2d the temperature rose to 105° F., and remained there for four days. On September 6th Gaulard saw her; the pulse was then

140, and irregular, and diarrhea was present. There were some sloughs on the vagina, and the perineal wound was suppurating. He curetted the uterus, bringing away nothing of importance, packed it with iodoform gauze, and resutured the perineum. The next day the temperature had fallen to 102.7° F., but on September 8th it rose again, and her general condition was very grave; 10 c.cm. of Marmorek's antistreptococcic serum were injected into the abdominal wall. Temperature rather lower next day, and a second injection of 2 c.cm. was given. From this time the temperature fell steadily, and the patient was soon out of danger. The uterine plugs were renewed every day. (2) A rickety woman was brought to the clinic on September 24th; this was her fourth pregnancy. The first labor was natural; in the two others delivery was effected by forceps. Anteroposterior diameter of pelvis $3\frac{1}{4}$ inches. An unsuccessful attempt to apply forceps had been made outside, so a basiotripsy was performed, delivery effected, and a douche of 1 in 4,000 perchloride of mercury given. Temperature rose on the 26th, and in the evening of the 27th it reached 104° F. The uterus was swabbed out with creosoted glycerine, some putrid fragments coming away, and plugged with iodoform gauze. On the 28th cultivations of streptococci were obtained from the discharge, so 10 c.cm. of antistreptococcic serum were injected (temperature then 104.9° F.). On September 29th a second injection was given, the temperature still rising. September 30th third injection; evening temperature 102.9° F. October 1st fourth injection of 10 c.cm. October 2d evening temperature 101.5°; general condition satisfactory, and recovery hoped for. No pain was felt at any time. After this the temperature fell steadily, and reached normal on the 4th. However, later in the evening of October 2d she was seized with bilious vomiting and meteorism, the pulse remaining as before, about 120. On October 4th and 5th her condition grew worse; she became semi-comatose, nothing controlling the vomiting, and she died on the 6th. The author had never before seen a case of puerperal fever die during defervescence, and he believes that the injections of serum were the cause of the vomiting. He fears that too much serum was used, for *post-mortem* there was no sign of peritonitis or of any suppuration. The question of the maximum dose, to exceed which is not safe, has yet to be settled. He is sure this treatment does not do away with the necessity of using the curette, which clears away any *débris*, and cleanses the center of infection. If the germs have already passed into the circulation the serum can be employed against them and their toxins.—*British Medical Journal*.

A CASE OF PELVIC CELLULITIS WITH ABSCESS: MISCARRIAGE, PYEMIA, CELIOTOMY, DEATH.—Mrs. L. was a German woman, forty-two years old. She was of medium height and in poor physical condition, having been exhausted by hard work. Thirteen years ago she had malaria, but there had been no return of the disease. She had three children. For the past six months she had had pains in the left inguinal region, which bothered her a

good deal but had never been severe enough to interfere with her duties. Her menses were always regular and normal. In her exhausted condition she became pregnant, but the pregnancy advanced only to the third month when, after three or four days of chills and high fever, she aborted. One week later I was called to see the case by Dr. Charles Stone, the attending physician. Since the miscarriage the chills and fever had continued without interruption and there was severe pain in the abdomen in the left iliac region. Four days after the miscarriage pain was felt in the elbow-joints, in the metacarpo-phalangeal joint of the right forefinger as well as in the metatarso-phalangeal joint of the right big toe. She was suffering great pain in these joints and they were all swollen and red, but there was no fluctuation felt over them. The temperature was 106° , and varied at intervals of a few hours. The chills were frequent, and the general condition very poor. She was very restless, and was tortured by a burning thirst. The mind was clear but the expression was anxious.

On examination the uterus was found to be somewhat subinvolved; the lochia were not offensive. On the left side of the uterus was a mass the size of a hen's egg, occupying the position of the tube and ovary; the mass was very sensitive, and gave a sense of semi-fluctuation when examined bimanually.

As the soundings prohibited an operation she was sent to the Boston City Hospital, and celiotomy was done at once by Dr. H. L. Burrell. At the operation the mass was aspirated and pus found. Using the needle as a guide, the sac was incised, and about three drachms of foul pus let out. Careful examination showed that the tube and ovary of the affected side were normal, and not involved by the inflammation which seemed to proceed entirely from the broad ligament. The operation lasted twenty minutes, and was not followed by much shock.

The next day the abdomen was tympanitic, but the patient was quite comfortable; skin, moist; eyes, anxious; tongue, cracked and red and dry; joints, unchanged; temperature, 101° ; pulse, 140. The next day she died, the cause of her death being general peritonitis and pyemic poisoning.

In this case it is interesting to note that the pyemic focus was in the broad ligament, and that the tube and ovary were perfectly normal. How long this focus had existed is uncertain, but the history of previous pain and discomfort indicates that it was present some time before the miscarriage took place; and the chills and fever also happening before the miscarriage, strengthens this view. Her miserable general condition made it impossible for her to rally after the operation. It is quite probable that her lowered vitality fostered the development of the pyemia.—*Dr. Edgar Garceau in Boston Medical and Surgical Journal.*

PEPSIN IN GASTRIC DISEASES.—Oppler (*Centralbl. f. inn. Med.*) describes in a preliminary communication a method of estimating the activity of pepsin. An hour after the test breakfast the contents of the stomach

are expressed, and the organ washed out with small quantities of distilled water. The washings along with the stomach contents are then made up to 1 or 2 liters according to the quantity. Dilute hydrochloric acid is added until the total acidity stands at 77. The nitrogen in a 2.1 per cent solution of albumin is estimated according to Kjeldal's method; 20 c.cm. of this solution is then added to 50 c.cm. of the stomach contents as above obtained, and the whole is digested at 37.5° C. for three hours. After the precipitation and coagulation of the undigested albumin, acid albumin, etc., the nitrogen of the digested portion is estimated, and the percentage of albumin thus calculated. The author thus obtained figures for normal individuals with which he could compare others from cases of gastric disease. In chronic gastritis especially the formation of pepsin was much diminished. In gastric carcinoma the same thing was noted, particularly where the growth affected the body of the stomach. In early cases of pyloric carcinoma pepsin may still be found, although no hydrochloric acid is present, but it gradually diminishes. After resection of the pylorus it is unquestionably possible to bring the affection of the mucous membrane to a standstill, and even for some recovery to occur. In atony and dilatation of the stomach diminished pepsin secretion is found only when a mucous catarrh with lessened acid secretion is present. Increased pepsin formation occurs in ulcer of the stomach, acid gastritis, chronic gastro-succorhea ("Magensaftfluss"), and occasionally in chlorosis, whereas nervous subacidity and most secondary diseases of the stomach show a diminution. In nervous dyspepsia the results are variable. Pepsin secretion as measured by the activity of pepsin appears to run parallel to the secretion of hydrochloric acid, but the correspondence is not complete. The author therefore thinks that the quantitative estimation of pepsin need hardly come into constant use.—*British Medical Journal*.

QUININE AMAUROSIS AND PALUDIC AMAUROSIS.—Demicheri (*Ann. d'Oculistique*) takes occasion, having had a case of marked quinine amblyopia, to point out wherein it differs from malarial amblyopia. According to Poncet the changes met with in the eye as the result of malaria are optic neuritis, peripapillary edema, extravasation of leucocytes, plugging of retinal and choroidal vessels by pigmented leucocytes, and hence multiple hemorrhages in the fundus; but the existence of such hemorrhages is not always determinable by the ophthalmoscope, only by the microscope. In the pernicious form of malaria the patient may come out of his comatose condition quite blind, the blindness lasting an hour or more. If the loss of vision is persistent, one can always make out fundus changes as above. In quinine intoxication the loss of vision is very persistent; from the first the whiteness of the disc is noteworthy, and the shrunken condition of the vessels; and these signs are present for years after the visual acuity has been recovered (when, as the result of malarial fever, there is contraction of the vessels, it is quite fleeting, and is limited to the arteries). There are

no inflammatory symptoms whatever of the retina or disc. Central vision is the first to recover; the concentric contraction of the fields for white is very persistent; color vision suffers as much as or more than the vision for white. The pathology of the condition is by most believed to be retinal ischemia from vaso-constriction of local or central origin. Prognosis is always more or less favorable, even in cases where electrical excitation has failed to produce any sensation of light. In the way of treatment nitrite of amyl and strychnine are recommended, but attention to hygiene is more important, living at a high altitude, exercise, massage, and baths. At the beginning dorsal decubitus has proved of use.—*Ibid.*

SPLENOMEXY—Giordano (*Rif. Méd.*, February 8, 1896,) reports the case of a girl, aged ten years, who had suffered from enlargement of the spleen and liver since early infancy. During the last three years the splenic tumor had increased; there was hemorrhage from the gums and nose, attacks of severe abdominal pain and profound anemia (42.5 per cent hemoglobin, 4,800,000 red corpuscles, 8,750 white). The lower margin of the liver came down to three fingers' breadth below the costal arch. The lower margin of the spleen, which was slightly tender, was felt two fingers' breadth above the crural arch and one finger's breadth from the umbilicus. No enlarged glands were felt in other parts of the body. There was no albuminuria. After fifteen days' daily intramuscular injection of ten centigrams of arseniate of quinine the splenic tumor was reduced to half its volume, and when lifted upward was found to drop back toward the pelvis. The subjective symptoms were not relieved. Laparotomy was performed along the exterior margin of the right rectus. The spleen was found to be four times its normal size, the hilum prolapsed and on a level with the umbilicus; the organ was hard and dotted with fibrous patches, and it could be raised upward, so that the lower pole corresponded to the umbilical level. The spleen was fixed to the abdominal muscles in a kind of aponeurotic peritoneal sac, the sutures passing through the splenic tissue as far as possible where the fibrous patches existed. The post-operative course was apyretic. The anemia was treated by injections of ferri et ammon. cit. (5 per cent) and of pot. iod. (5 per cent). When the child left the hospital she had a good color (hemoglobin 46 per cent). The spleen remained fixed, and the child could run and walk without any pain or any recurrence of the abdominal spasms which used to occur previously after exertion.—*Ibid.*

ICTERUS DUE TO LACTOPHENIN.—Wenzel, of Unverricht's Clinic (*Centralbl. f. inn. Med.*), points out that many antipyretics and analgesics belonging to the phenetidin group owe their toxic properties to their splitting up into paramidophenol. This body is a poison to red cells, and after a time produces cyanosis and collapse. Numerous writers have reported unpleasant results from the use of lactophenin, such as vomiting, slight cyanosis, disturbance in the heart's action, erythematous rashes, etc. Gerhardt

observed poisoning with collapse after a dose of 0.5 g. lactophenin; and Fürbringer saw almost fatal collapse. Strauss recorded three severe cases of poisoning after a large amount of lactophenin had been given. There were gastric symptoms present, and also jaundice. The symptoms disappeared when the agent was omitted. The author records a case of jaundice in a morphinomaniac aged thirty-four, in whom severe pain was treated by lactophenin in doses of 0.3 g. thrice daily. There were no unpleasant symptoms for fourteen days, but the pains were no better. Quite suddenly jaundice supervened. The stools were without color, and the urine deeply bile-stained. There was no temperature, no itching of the skin, and no slowing of the pulse. The jaundice disappeared very slowly. During the height of the jaundice there was nausea and vomiting. The author thinks that the jaundice was due to the lactophenin, and especially to paramidophenol.—*Ibid.*

PHYSIO-PATHOLOGY OF MENSTRUATION.—Silva (*Il Policlinico*, February 15, 1896,) after a brief enumeration of the various ailments, functional or other, which have been shown to be influenced by the menstrual state, gives the results of some observations made by him on menstruating women who were free from any disease of the generative organs. He found that the alkaline reaction of the blood (as tested by the amount of oxalic acid required to neutralize it) was constantly lower during the menstrual than in the inter-menstrual period. Inasmuch as the bactericidal power of the blood serum diminishes with the diminution of its alkalinity, the author believes that his observations serve to explain the fact that women are more likely to become infected with pathogenic germs during the menstrual period than at other times. During the menstrual period the author found that the respiratory and circulatory systems did not respond to external stimuli so readily as at other times. The vasomotor system generally was found during menstruation to react to stimuli very much as it does in pyrexial conditions, an observation in which the author finds some support for the view that menstruation is nothing less than a puerperal process in embryo.—*Ibid.*

MENSTRUATION, SUCKLING, AND CHLOROSIS.—Charrin (*Médecine Mod.*, January 11, 1896,) is inclined to the old view that chlorosis is the result not the cause of amenorrhea; he terms it a menstrual auto-intoxication. Immediately before the period the toxicity of the serum is at a maximum. Wet nurses who menstruate during lactation are apt, during the days preceding the show of blood, to cause their sucklings to suffer from diarrhea and cutaneous eruptions. Such women themselves often have herpes and fever. When the "show" appears health is restored, and the infants again thrive. Charrin finds that menstruation is a true excretory process, a purging of waste products. In sickly young girls the ill-development of histological elements of the genital tract prevents this elimination. Waste products accumulate, and the phenomena of chlorosis develop.—*Ibid.*

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNĀ."

Vol. 21.

SATURDAY, MAY 16, 1896.

No. 10.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

Subscriptions and advertisements received, specimen copies and bound volumes for sale by the undersigned, to whom remittances may be sent by postal money order, bank check, or registered letter. Address

JOHN P. MORTON & COMPANY, Louisville, Ky.

THE AMERICAN MEDICAL ASSOCIATION.

The forty-seventh annual meeting of this distinguished body was held in Atlanta, Ga., May 5th, 6th, 7th, and 8th. The attendance was up to the average, and the proceedings, while not in any sense epoch making, were creditable to the profession and interesting.

The address of the president, Dr. R. Beverly Cole, was a vigorous protest against current medical abuses, which the speaker believes to be responsible for professional degeneration, the signs of which he seems to see on every hand.

The symptoms which to the president's diagnostic eye are pathognomonic of disintegration in the body medical are: (1) "The tendency of medical men to depreciate the dignity of their profession and bring it to a commercial level; (2) cut-rate insurance examinations; (3) the total abstinence of reciprocity between the United States and foreign countries as to laws governing the right to practice; (4) the medical bolstering of quack medicines; (5) unjustifiable operations."

Under the first head he says:

When the older members of the profession were yet young, to be a physician was considered the greatest of honors and the holiest of callings; the medical man was looked upon by those whose ailments he ministered to in a sense as a saint, and his word was law, to disobey which was a mortal offense. The doctor was a gentleman as well as a scholar, commanding the love and esteem of his patients and the community in which he lived. This was then the rule, but now it is the exception, certainly as to the scholarly

attainments of the physician. The reason for this is undoubtedly to be found in the multiplicity of so-called medical schools with their bidding for patronage, the low standard of preliminary requirement, the limited curriculum pursued, and the superficial examinations. The ranks of the profession are overcrowded, and those who are in any manner qualified, together with many who are not, in order as speedily as possible to become prominent, resort either to the making of books while they are still without the least experience in the science of which they profess to treat, or organize medical schools and thus increase the evil of overcrowding. The only remedy for these growing evils is governmental interference and regulation of medical education, or at least of professional examination.

Upon the second (insurance examinations) we may quote :

No man qualified to make a thorough examination, if he be properly imbued with the value and importance of his service, will or can assume the responsibility attaching to his function as an examiner without an adequate return. Surely the fee of five dollars was small enough, and the offer of any sum less is simply an insult to an educated physician, and a bid for cheap, unscientific service, which can be had from the ranks of the unskilled and irresponsible. But these are not such services as a sound insurance corporation desires. Let every examiner plant his feet and decline employment without adequate compensation. Let it be published to the world that certain companies employ incompetent men, or, paying cut fees, receive cut services, and very soon will they discover their mistake and be brought to a realization of the fact that the best goods always command the best prices.

This protest is most pertinent. The evil of the employment of incompetent men to make insurance examinations is of a magnitude beyond any thing suspected by the managers of companies, or the holders of policies. The disease, however, will probably in time work its own cure; since, under the policy pursued by certain companies, the wealth of the insurers must decrease as the death-rate of the insured increases.

Under the third count the president makes timely protest against our unquestioning reception of the holders of foreign medical diplomas. He says :

In looking over the medical registers of the various countries, it may be seen at once that the number of graduates of the medical schools is greatly in excess of the number of men engaged in the practice of their profession. If we seek the cause of this discrepancy, we shall learn that from three fourths to seven eighths of those who do not remain at home come to America.

may pass the required examination for the degree of doctor in medicine and then come to America and pose as a learned foreign doctor. Foreign governments, however, do not grant to Americans the right to practice in their countries. While these governments are to be commended for imposing a high standard of medical qualifications, yet it is a poor rule that does not work both ways.

Amen, Mr. President! We suffer enough from the increment of foreign paupers, etc., upon our territory. Why should we open our arms to the foreign "jacklegged doctor"?

On the fourth count the president calls attention to the almost universal support given by the clergy to quackery and quack nostrums; but most fitly he turns his fire rearward in the following:

This pernicious practice is, however, not limited to the representative of the church, but extends to the ranks of our own profession. Medical men, particularly the younger, often attach their names to general recommendations and grant individual certificates setting forth the wonderful results of the employment of certain proprietary medicines. This is less excusable still, since such certificates carry with them the prestige of professional indorsement. It is in itself a gross violation of the code by which we profess to be governed. All such violations on the part of members of the Association should be made punishable, at least to the extent of reprimand, if not of expulsion.

Again we say, Amen! May the Association take prompt action upon the closing suggestion!

And lastly and most admirably, he deals with the at present too radical tendencies of surgery:

The tendency to push surgery to the exclusion or neglect of medicine is becoming glaringly conspicuous.

It would seem that every tyro imagines that surgery offers the quickest route to success, and that fame is to be attained *only through blood*. Hence every case, the symptoms of which are directed to McBurney's point, is necessarily a case of appendicitis, for which the only sovereign remedy is the knife; or, if it be a woman, and her suffering is referred to the ovarian region, or she have a fibroma, however small and barren of symptoms of importance, not only must she be subjected to celiotomy at once, but in nine cases out of ten has her uterus, or uterus and ovaries, sacrificed, thus unsexing her without the slightest effort being made to spare these organs, and preserve to the woman her distinguishing function.

If the same practice prevailed to emasculate every man who might have a neurosis of the cord and neighboring organs, there would be fewer operations than are now done on woman for no greater cause. So common have these operations become of late, owing to the comparative safety through the employment of asepsis attending them, that many women consent to or even apply for them in order that they may avoid bearing children. How far a surgeon may be justified under these circumstances in rendering the

desired aid is problematical, whether viewed from either a moral or legal standpoint. . . .

That these operations are called for and loudly demanded by the exigencies of the case occasionally no one can deny ; but that they are being done much too frequently I challenge successful contradiction.

The mere fact that the improvements and advancements in surgical procedure make them relatively safe should not be advanced as an argument, and I look with suspicion upon him who may claim that, as no use can be assigned the appendix vermiformis, it should upon the slightest provocation or excuse be removed. Is it not time that a halt had been called, and that such cases should be assigned to those who are expert in diagnostic technique as well as surgical procedure? Can any law of either God or man be found to justify oöphorectomy or hysterectomy except under the most dire conditions?

The next annual meeting will be held in Philadelphia on the first Tuesday in June, 1897.

The officers-elect are Dr. Nicholas Senn, of Illinois, President ; Dr. George M. Sternberg, U. S. Army, First Vice-President.

The "Address on Medicine" was assigned to Dr. Austin Flint, of New York ; the "Address on Surgery," to Dr. W. W. Keen, of Pennsylvania ; "State Medicine," to Dr. Jerome Cochrane, of Alabama.

Members of the Board of Trustees are : Dr. E. E. Montgomery, of Philadelphia ; Dr. Joseph M. Mathews, of Louisville ; Dr. C. A. L. Reed, Cincinnati, and Dr. G. C. Savage, of Nashville.

AMERICAN MEDICAL COLLEGE ASSOCIATION.

This body held its meeting in Atlanta, Ga., simultaneously with the meeting of the American Medical Association.

No important changes were made in the standard of requirements for matriculates and graduates in medicine. But there was unanimity among the delegates in the purpose to raise medical education in this country to a level with that of any other department of knowledge pursued in our best universities and colleges. Though no direct effort to secure it was made, there are good grounds for hope that the schools in the Southern States will, in the near future, connect themselves with this association.

The honor of the presidency was bestowed upon Prof. J. M. Bodine, M. D., Dean of the Medical Department of the University of Louisville. This was but a merited compliment to an able exponent of science and a pioneer reformer in medical education.

Notes and Queries.

"SYSTEMATIC CONSERVATION" IN SEVERE INJURIES OF THE LIMBS.—Reclus (*Rev. de Chir.*) reports six cases of severe open injuries of the limbs treated by a novel conservative method with such success as to justify, in his opinion, the hope that henceforth there will be no need to perform traumatic amputations. Instead of removing a crushed limb the author would embalm the injured structures in antiseptic applications, and wait for a natural separation of the dead from the living parts, not interfering except to saw through bone. After careful disinfection of the skin, and removal of detached fragments of bone and of loose tendons and torn muscle, the whole wound is forcibly injected with water heated to a temperature of 140° F. Hot water acts as an antiseptic, and increases the activity of other antiseptic agents. Moreover, when injected into a large and deep wound it arrests hemorrhage and warms the chilled and collapsed patient. The interior of the wound is next thoroughly disinfected by a solution of permanganate of potash applied on pieces of wool, and finally embalmed by what is called a polyantiseptic pomade, containing a very large proportion of active agents, some of which being absorbable, such as corrosive sublimate, carbolic acid, and iodoform, are in small quantities, while others which are not so absorbable, as boric acid, salol, and antipyrin, are distributed more abundantly. This pomade is spread thickly on bands of tarlatan, which are thrust into all the crevices of the wound. The injured part is covered with a layer of cotton wool, which is firmly bound down to the surface of the limb by bandages. By the end of the third week, it is stated, the dead have become detached from the living structures, and the sloughs are quite loose. When the exposed surface is ruddy and granulating nothing remains save to separate the soft parts from the exposed bone, and to remove as much of this as possible. In most cases there is an excess of skin on one surface corresponding to the loss of substance on the other, so that there will be no difficulty after dividing the bone in obtaining a suitable flap.—*British Medical Journal*.

DEATHS UNDER ANESTHETICS.—One of the gravest perils connected with anesthesia is asphyxia due either to paralysis of the central controlling mechanism regulating respiration—a condition usually easily detected and remedied—or to some peripheral interference with breathing—*e. g.*, spasm of the glottis, foreign bodies in the air-passages, etc. In cases of empyemata where the abscess opens into a bronchus this danger is rendered acute. The patient is liable to be turned on the side for operative purposes and the pus coughed from the diseased side is aspirated into the lung of that

side, and in some cases even into that of the healthy side. This, coupled with the hampered condition of the heart from pressure or displacement, too often determines a fatal issue. Through the courtesy of Dr. Howard Green we record a case of death under the A. C. E. mixture followed by ether, which exemplifies these remarks. The patient, a young woman, aged twenty-five, was admitted to Charing-cross Hospital for relief of an abscess in her chest. The position of the abscess was not determined by repeated acupuncture, and, as the patient was rapidly losing ground, it was decided to resect a rib and explore the chest. Her condition at the time of the operation was critical. Hectic fever, progressive emaciation, and constant expectoration of foul purulent material existed. The empyema affected the left side, and was believed to be of gastric origin. The patient was given the A.C.E. mixture (two drams) as a preliminary to ether, and the chest was punctured. The second puncture drew pus. Resection of the rib was commenced, but the patient became asphyxiated from pus entering the air-passages in large quantities. The amount of ether given was an ounce and a half. Artificial respiration was practiced, but recovery did not take place. We are not told what position the patient was in when the operation was in progress.—*Lancet*.

MICRO-ORGANISMS AND DIGESTION.—Nencki (*Vratch*) during the past ten years has been investigating the question as to what part is played by micro-organisms in digestion. He has come to the conclusion that they possess the property of changing the insoluble forms of carbohydrates and albumin into a soluble form. As regards the question whether the action of micro-organisms is necessary for the normal process of digestion, Nencki endeavors to prove that it is not. The grounds upon which he bases this conclusion are as follows: (1) The acid of the stomach destroys the majority of the micro-organisms; only a small number escape this fate and get with the food into the intestinal tract. In the small intestines their action is confined to the decomposition of the carbohydrates and the formation of lactic and succinic acids, alcohol, etc. The decomposition of albumins and the formation of the aromatic bodies, such as phenol, cresol, indol, scatol, and of the different acids under their influence, takes place only in the large intestine. Experience shows—the author mentions one case of his own observation and one of Zanolowsky of Warsaw—that one can live very long without the large intestine, if there is an artificial anus near the ileo-cecal valve. (2) Newborn guinea-pigs were put into a closed bell and kept on a sterilized milk diet, the respiratory air being also sterilized. After a time the animals were killed, and all the organs were found to be quite normal. Microscopical investigations of the intestinal tract failed to show the presence of any micro-organisms. The time will come, says the author, when we shall be able to remove micro-organisms entirely from our food, but at present we can only say that they are only hurtful, and not in any way beneficial.—*British Medical Journal*.

THE TSETSE FLY DISEASE IN ZULULAND.—The tsetse fly disease, called "magana" by the natives, occurs in the horse, donkey, ox, and dog, and varies in duration from a few days or weeks to many months. It is uniformly fatal to the horse, donkey, and dog, but of the cattle affected with it a few recover. It is characterized by fever, more or less rapid destruction of the red blood corpuscles, extreme emaciation, and infiltration of coagulable lymph into the subcutaneous tissue of the neck, abdomen, or extremities, which consequently become swollen. *Post-mortem* examination shows the presence of a yellow, gelatinous material in the subcutaneous tissue and under the serous covering of the heart, ecchymoses in various regions, and congestion and fatty degeneration of many organs. The tsetse fly (*Glossina morsitans*, Westwood,) is about 11 mm. or seven sixteenths of an inch in length, and has transparent wings about 10 mm. long. On the upper surface of the abdomen there is a longitudinal yellow line with four yellow lines crossing it at right angles. In 1894 Surgeon-Major David Bruce, A. M. S., discovered that the blood of animals suffering from the tsetse fly disease invariably contained a hematozoön which had not been previously observed in Africa, but which he considers to be either identical with or closely resembling the *Trypanosoma Evansi* found in surra, a disease occurring in India and Burmah; surra, however, as known in India, does not affect cattle. In fresh blood these hematozoa are seen as actively moving transparent elongated bodies, in thickness about a quarter of the diameter of a red corpuscle, and in length about two or three times the diameter of a corpuscle. One end is bluntly pointed and the other is prolonged into a very fine lash, which is in constant whiplike motion; the body is cylindrical and has a transparent, delicate, longitudinal membrane or fin, which is also in constant motion. Surgeon-Major Bruce believes that the fly acts only as a carrier of these microbes from infected to susceptible animals, and does not cause the disease by means of any poison elaborated by itself. A limited number of flies may bite a susceptible animal over and over again without producing any ill effect; but, when a horse is taken into the fly country for even a few hours, or when numerous successive relays of flies freshly caught in the fly country and brought into a healthy district are made to settle on an animal there, the disease is almost inevitably set up. Five flies kept in a cage with muslin sides were allowed to bite the shaved abdomen of a small dog every two days from September 25th to November 28th, but the animal remained quite healthy. On the other hand, flies which had fed for a short time on a dog affected with fly disease were allowed to bite another dog on November 21st, 23d, 25th, and 29th, the effect being that on December 5th hematozoa were found in its blood. In order to show that neither food nor water is the channel by which the disease is conveyed, two healthy horses, provided with network nosebags, were taken into the fly country from about 10 A. M. to 4 P. M. on September 19th, 24th, and 29th, but were not allowed to graze or drink. Many flies settled on them and they both contracted the disease, one on

October 4th, and the other about October 28th. Another experiment was made by bringing to Ubombo tsetse flies caught in the low country and allowing them to bite a healthy horse; 129 flies were used in this way on ten days, from November 22d to December 14th, the horse fell ill on December 15th and the hematozoa were found in its blood. The source from which the fly obtains the hematozoa still remains to be discovered.—*Lancet*.

FERRATIN.—Dr. Perekham, of Lakeside Hospital, Chicago, says: "The writer's experience with ferratin in cases of anemia and general debility from malnutrition, and especially in one case of chronic malarial poisoning, has resulted most happily. The above mentioned favorable reports were confirmed, the drug was easily taken, and the improvement in weight, appetite, and general state of health was strikingly demonstrated. Excretion of urea and solids by the kidneys was increased under its influence.

In one case of malarial poisoning without chills, fever or distinct malarial paroxysm, and in which the plasmodium malariae was found in the blood and confirmed by Dr. Frank A. Johnson, of this city, the patient suffered from excruciating neuralgic headache, hallucination, disturbed vision, ringing in the ears, diarrhea in the morning, disturbed and unrefreshing sleep, pain in the back, knees, and along the sciatic nerve, tickling and burning of the hands and feet. After giving her quinine with a tonic of iron, strychnia, and arsenic for nearly six weeks, the above mentioned symptoms continued although in a somewhat milder form. Ferratin was substituted for the other tonics in half-gram doses three times daily, and three-grain quinine capsules were given in the morning and sometimes at noon. The improvement after the use of ferratin for one week was apparent, and in two weeks all hallucinations and delusions disappeared.

The following case of anemia is reported because the improvement under the use of ferratin was so striking as to merit a special mention:

Miss S. G., aged seventeen, of good family history, had previous to April, 1895, enjoyed excellent health, and weighed one hundred and forty pounds. Menstruated at fourteen, always regular. April last, after an attack of grippe, she quickly became anemic, lost her appetite, felt languid and tired after the least physical exercise. Catamenia gradually diminished, and the last menstruation occurred nearly three months previous to her coming under my observation. Had received various treatments for over seven months without benefit. Her condition on November 15th was as follows: Face pale, of waxy color, lips, and conjunctiva almost white, complained of headache, insomnia, constipation, shortness of breath on the slightest exertion, palpitation of the heart, bad appetite, etc. Physical examination of the lungs and heart, with the exception of anemic bruit in the neck and over the pericardia, was negative.

Ferratin was ordered in half-gram doses, increasing to a gram three times daily, with instructions as to hygienic regulations, nourishing food, and moderate exercise.

The patient began to improve after the first week. Gradually her appetite returned, headaches and insomnia disappearing, and the red color was restored to her lips and face. December 23d, menstruated but slightly, flow lasting two days.

The urine was examined for albumin and sugar with negative result. The sp. gr., urea, and solids at intervals were as follows:

	Sp. Gr.	Quantity ounces.	Solids grs.	Urea grs.
November 16th,	1010	25	275	125
November 26th,	1014	30	462	200
December 10th,	1017	34	635	272
December 24th,	1020	37	814	340

The red blood corpuscle count showed the following results: November 16th, 2,100,000 per ccm.; December 6th, 2,800,000 per ccm.; December 25th, 4,150,000 ccm.

Ferratin can be safely recommended as a hematinic remedy, but suitable diet, hygiene, and exercise are not to be neglected.

ANTITOXIC SUBSTANCES.—Grosz (*Wiener med. Presse*) and Freund experimented with various substances as to their power of immunizing animals against diseases. (1) With *histon*, a decomposition product of tissue fibrinogen, they found there was a relation between coagulation and passive immunization. Substances which retard clotting, histon among them, lessen the activity of the diphtheria toxins on animals, while those which favor it have no such action. Histon, however, is much less active than Behring's serum. The authors suppose that antitoxines are formed by the meeting of bacteria or their products with some substance produced by the organism; but, considering the slight effect produced by injecting histon, this can not be the latter body. (2) *Albumoses*: Mathes has proved that deutero-albumose has essentially the same action as tuberculin. The authors found that when albumose solution was injected into animals at the same time as diphtheria or tetanus toxin the animals survived, while control animals died. They succeeded also by acting on toxins by albumose in a water bath in attenuating the toxin and in isolating a body having antitoxic properties. This may be what happens in the body, and the experiments may lead to the production of antitoxic serum in the test tube and water bath. After this communication Paltauf pointed out that there was a striking difference between the body isolated by Grosz and Freund and antitoxines obtained in the usual way, since the former acted only in much larger doses than the latter.—*British Medical Journal*.

ABDOMINAL SECTION IN NEWBORN INFANTS FOR UMBILICAL HERNIA. Marjantschik (*Centralbl. f. Gynäk.*) relates an operation upon a female child aged a little over thirty hours. There was a large umbilical hernia. The liver was almost entirely in the sac, and reduction of the intestines proved very difficult. The edges of the abdominal wound were vivified

and united by twelve deep and four superficial sutures, the former being passed through all the layers of the parietes. The child took a dram of chloroform during the fifty-five minutes that the operation lasted. Full antiseptic precautions were taken. The child died on the fifth day. Peritonitis and gastro-colitis were detected. Marjantschik regrets that an enema of ten minims of cognac, and also two drops by the mouth, were given on the third day. To this medication, intended as a stimulant, he attributes the gastro-intestinal inflammation. The spleen was ill-developed. The author tabulates thirty-one cases of abdominal section in newborn infants for hernia funiculi umbilicalis, making thirty-two in all, out of which eight, including his own, died; three died within seven hours; four within five days, one or more of these might have succumbed to some coincident affection. The eighth ('Treves') died of convulsions on the twenty-third day. Out of the twenty-four recoveries, four were reported as cured within a month (one only a fortnight) of the operation; the remainder seem to have been observed for a longer space of time before their cases were recorded. *Ibid.*

DETERMINATION OF THE POSITION AND SIZE OF THE STOMACH.—Boas (*Centralbl. f. inn. Med.*) first refers to the determination of the lower limit of the stomach by means of a rigid tube. The use of such an instrument may be not unattended with risk, and has consequently been abandoned. It is different with the soft Nélaton sounds. The author has used a method lately introduced by Turck but with a modified instrument. This soft bougie has a sponge attached to the lower end, which latter may be made to rotate by means of an apparatus at the upper end. The rotary movement of the tube can easily be felt, and the whole wall of the stomach forming the greater curvature can thus be explored. In twenty-five out of thirty cases the author used this instrument with success. In fat people and those with rigid abdominal walls it may be difficult or impossible, but in most stomach diseases the nutrition of the patient is affected. The examination is best made with the stomach empty, or containing one-half to one liter of water, and the patient in the recumbent position; it may even succeed in the upright position. The sound moves with respiration; the position of the pylorus may also be ascertained. The introduction of a liter of water has no effect upon the lower limit of the stomach, but with one to one and a half liters the fundus extends one to three centimeters lower down. The vertical position of the stomach may thus also be recognized.—*Ibid.*

BUBONIC PLAGUE AND RINDERPEST IN HONG KONG.—During the two weeks that have elapsed since the last report on the subject, the number of cases of bubonic plague in Hong Kong has been sixty-two, and the number of deaths sixty. This brings the totals reported between January 1st and March 14th up to 232 and 204 respectively. The circumstance that during the past month there has been a weekly decrease in the cases reported

seems to indicate that the means being adopted to stamp out the plague are proving successful. Meantime, during the past ten days, a fresh source of anxiety has arisen in the outbreak of rinderpest in the foreign (chiefly Australian) herd of the Dairy Farm Company, a company organized some years ago to supply dairy produce entirely under European supervision. About 150 cows out of some 200 have already died or been slaughtered. The carcasses have been conveyed by Government four miles out to sea, and, after being opened and heavily weighted, thrown overboard. The most serious aspect of the matter is the temporary loss of the most important source of the colony's milk supply. Fortunately, there is as yet no evidence of the spread of the epidemic to other dairies.—*Ibid.*

A NOTABLE DEMONSTRATION OF THE X-RAYS.—At the meeting of the Suffolk District Medical Society, which was held in Walker Hall of the Massachusetts Institute of Technology on April 25th, Dr. Francis H. Williams gave an extremely interesting demonstration of the work that had been done at the Institute of Technology in developing the application of the x-rays, and in particular of the fluoscope to medical purposes.

Several excellent radiographs of the hand and wrist were shown, and also one which showed in a very perfect manner the elbow-joint. The fluorescence of a plate covered with tungstate of calcium was demonstrated so that it could be seen by every member of the large audience, and those near could see clearly the outlines of the bones of the hand and wrist placed between the tube and the fluorescent screen. This demonstration was made of course with the room darkened. Later, individual members had an opportunity to look through the fluoscope, which is simply a paste-board box, having tungstate of calcium spread upon the inner surface of the distal end, and all could see with startling distinctness the outlines of the bones of the hand and forearm when held between the fluoscope and the Crookes tube which was the source of the rays.

More wonderful even than what was actually shown to the audience was Dr. Williams' account of what had been accomplished with the fluoscope in the diagnosis of diseases of the thorax. Dr. Williams and Messrs. Norton and Lawrence had found the thorax much more transparent to the x-rays than the abdomen. The lungs were particularly transparent, the rays passing clearly through them, and the outline of the ribs being plainly seen. The liver was comparatively opaque to the rays, and they were able to mark out accurately the position of the upper border of the liver in extreme inspiration and expiration, and there was found to be a difference of three inches in these levels. Dr. Williams had brought a patient from the City Hospital to the Institute upon whose skin the area of a greatly hypertrophied heart had been carefully marked out by percussion, and by using the fluoscope an outline was marked out on the man's shirt which everywhere corresponded very closely with the area previously marked out on the skin by percussion.

Dr. Williams was warmly applauded at the close of his most interesting and successful demonstration. By it was made evident an important fact, which was brought forward by Dr. Williams as by Dr. MacIntyre in a recent demonstration at Edinburgh, namely, that the surgeon would not be obliged to await the tedious process of developing a photographic plate before making his diagnosis, but would be enabled to look right through the bandages and dressings of a fractured limb, for instance, and see at a glance the position and relations of the fragments. To-day a physician might take his patient with a broken arm to the Institute, and there with the aid of Professor Cross's apparatus and the fluoscope, see at a glance the position of the ends of the bone, and that without removing the bandages.

The applicability of fluorescopy to the diagnosis of internal disease was not the least interesting and significant of the observations made by Mr. Norton and Dr. Williams. The statement of Dr. Williams that they had up to the present time been unable successfully to outline the viscera of the lower abdomen and pelvis by the rays, which are not freely transmitted to the intestines, need not discourage us when we consider the short time in which the other already remarkable results have been attained.

The applicability of the method to cerebral surgery is in some degree assured, for we are informed by both Drs. Williams and MacIntyre that the skull is permeable to the rays; and, as we have noted elsewhere, Dr. MacIntyre has published a radiograph showing with the utmost distinctness three bullets placed inside the skull.—*Boston Medical and Surgical Journal.*

THE LEGAL ASPECT OF AUTOPSIES.—A case which was tried in the Superior Court in Boston during the past week is of interest, as showing the present state of the law in regard to the making of autopsies. There is no statute which prescribes when a *post-mortem* examination may or may not be made, except that which relates to the duties of medical examiners; and there are no decisions of the courts which bear directly upon the subject. Although a dead body is not legally property, it has been held that a man has the right to have the body of his wife buried where he wishes. It is claimed by the plaintiff's counsel in this case, that this right of sepulcher includes that the body shall not be in any way mutilated. An action of tort was brought to recover damages for mental distress, due to the fact that an autopsy had been done on the body of the wife of the plaintiff, who alleged that he had not given his consent. The autopsy was not done by the defendant, but by his direction as visiting physician. The defendant maintained that permission had been given to his house-officer, in the presence of the matron of the institution, by the plaintiff. The counsel for the defense moved that, even if consent had not been given, the plaintiff had no legal right to recover. The judge ruled that he had such a right, and the case went to the jury on the question of fact, and the verdict was found for defendant. This ruling was practically for the purpose of getting the ques-

tion of fact before the jury, and was subject to appeal in case the verdict was given for the plaintiff, and did not constitute a precedent.

It remains, then, entirely undecided whether a physician may make, or may cause to be made, an autopsy except with the consent of the next of kin, without running the risk of a suit for damages. This would apply equally to a public institution or to a private case. The question can only be decided by an appeal to the Supreme Court in some suit actually brought, unless the legislature should pass a statute covering it. Permission in writing has the advantage of verbal permission only as additional evidence that consent was given.—*Ibid.*

THE ANTITOXIN OF DIPHTHERIA IN LONDON.—The report of the Metropolitan Asylums Board of London on the results from the use of antitoxin in diphtheria shows that during the year 1895 there were 3,529 cases of diphtheria treated in these six metropolitan asylum hospitals, of which 796, or 22.5 per cent, proved fatal; in 1894 the number of cases treated was 3,042 and the deaths 902, showing a mortality equal to 29.6 per cent. Thus the proportional case mortality was 7.1 per cent lower in 1895 than in 1894. This marked decline in the mortality of hospital treated cases of diphtheria in 1895, considering that the average severity of the cases was "about equal" in the two years, has been ascribed by the medical superintendents to the antitoxin treatment in nearly 62 per cent of the cases in 1895.

The unanimous testimony of all the reporters has been that this method of treatment has had a marked influence in mitigating the severity of the disease, and the degree of benefit has been found proportionate, as in all the series of cases reported, to the promptness with which the remedy was applied. Extension of the disease to the larynx after admission occurred in a much smaller proportion of cases in 1895. The mortality of tracheotomized cases in 1894 was 70.4 per cent, in 1895, 49.4 per cent. This marked improvement in the tracheotomized cases, as the *Lancet* says, can not be ascribed to any accidental circumstance.

Although the percentage of albuminuria and nephritis has been somewhat greater under the antitoxin treatment, it is only just to consider, that (1) a more efficacious treatment by tiding the patient over a severe illness would, other things being equal, necessarily tend to cause an increase in the number of cases presenting complications, since a larger number of patients who had suffered from severe attacks would survive; (2) that there is some evidence that there was in 1895 a greater tendency to complications than in 1894, since among the cases in 1895 not treated with antitoxin there was a larger percentage of complications, especially of albuminuria and paralysis; (3) that clinical observation may have been, and probably was, more minute in 1895.

The statistics show a percentage of 40.9 of albuminuria in 1895 against 24.1 in 1894, and 23.2 of paralysis in 1895, as against 13.2 in 1894. A rash followed the use of the remedy in 45.9 per cent of the cases.

The report ends with the following statement, signed by the six medical superintendents: "We are of the opinion that in antitoxic serum we possess a remedy of distinctly greater value in the treatment of diphtheria than any other with which we are acquainted."—*Boston Medical and Surgical Journal*.

THE EFFECTS OF DIPHTHERIA TOXIN ON THE NERVOUS SYSTEM.—Ceni (*Rif. Med.*), as the result of clinical and experimental observations, finds that appreciable and morphological alterations in the nervous elements can not always be seen in men who have died of diphtheria, especially if death occurs rapidly and early in the disease. In rabbits and guinea-pigs, on the other hand, marked morphological alterations in the nerve cells are constantly found after death. The intensity and diffusion of the lesions are more closely related to the duration of the toxic action than to its virulence. As a rule both in men and animals the changes are limited to the protoplasmic prolongations of the cells, leaving the cell substance unaltered. In man when atrophy of the nerve elements occurs it is limited to a few isolated cells; in animals, as a rule, the process affects extensive groups of cells. Acquired refractoriness to the diphtheritic poison is well shown in the enormous resistance which the nerve cells exhibit in these cases when exposed to the toxin.—*British Medical Journal*.

ALCAPTONURIA.—Moraczewski (*Centralbl. f. inn. Med.*) reports a case of alcaptonuria in a patient suffering from pulmonary and peritoneal tuberculosis. The urine was dark in color; it contained no methemoglobin but much indican. The patient never took any derivative of phenol while under treatment. Death was due to increasing dyspnea. The urine presented all the characteristic reactions of alcapton. It became more deeply brown on standing. When alkalies were added it assumed a dark color, this color first appearing where the urine was in contact with air. If air was excluded the color did not develop. It reduced at once silver nitrate in ammoniacal solution, copper salts, etc. Alcaptonuria has hitherto been noted as a chronic disease, but in this case there was no evidence of its previous existence. The alcapton in the urine has been increased by taking tyrosin. The author would refer its existence in the above case to the decomposition products of albumin. There was much indican in the urine as is almost regularly seen in peritonitis.—*Ibid.*

CHRONIC ICTERUS THROUGH COMPRESSION OF THE COMMON BILE DUCT BY LYMPH GLANDS.—A. Köster (*Cent. f. inn. Med.*) gives the case of a boy, aged three, with tuberculous family history, who had been jaundiced for two years before he came under observation with chronic inflammation of the right lung. The icterus vanished, but the boy died with metastases

increased in amount and the bile ducts dilated. The gall bladder was collapsed, the hepatic and common ducts were decidedly dilated, and there were enlarged glands at the hilum. At the lower end of the common bile duct was a perforation leading into a small cavity filled with caseous material. In the substance of the liver were tubercles; the mesenteric glands were enlarged.—*Ibid.*

SERUM-THERAPY IN SYPHILIS.—Pellizzari (*Clin. Modern*) continues his observations on this subject, and reports three more cases, making ten in all. The author asserts that in every case the syphilitic manifestations were rendered milder as a result of the treatment, although in not a few of the cases one might have expected severe syphilis from the initial symptoms. The best results were obtained where the treatment was begun earliest; hence the author believes that serum-therapy acts in these cases by conferring a sort of immunity on the tissues. On the supposition that the antitoxin may be a product of the toxin, and so most powerful when the latter is most active, the author would in future prefer to take his antitoxin from subjects in the height of explosion of the specific phenomenon of syphilis. *Ibid.*

MORBUS CORBIS: DEATH DURING LABOR.—Macé (*Annales de Gynéc. et d'Obstét.*) relates two cases in Porak's wards. The first mother was in her fourth pregnancy, and had shown signs of asystolism. Fatal syncope set in during labor. The forceps were applied and the child delivered, but it was asphyxiated and could not be revived. At the necropsy mitral obstruction and advanced myocarditis were detected in the mother's heart. In the second case the mother also died of syncope, and there was acute edema of the lungs, with double hydrothorax. The mitral orifice was contracted. The child was delivered and revived, and lived for five days.—*Ibid.*

THE BACILLUS OF CHANCROID (VENEREAL ULCER).—Colombini has been working on this subject, and publishes his results in a pamphlet. He finds that the bacillus of Ducrey and the strepto-bacillus of Unna are one and the same organism, characterized by being found in chains, by staining chiefly at the ends and not in the center, by being decolorized by Gram's or Kühne's method, by the difficulty of obtaining pure culture since a suitable nutritive medium could not be found, and by the rounded ends of the individual bacilli. The best staining agent was methylene blue. Inoculation into animals was uniformly negative. The bacillus is rarely found in bubonic pus.—*Ibid.*

THE French Academy of Medicine has decided to divide a prize of 25,000 francs between Dr. Roux, of Paris, and Dr. Behring, of Berlin, in recognition of their joint work upon the antitoxic treatment of diphtheria.

Special Notices.

HYOSCINE HYDROBROMATE was admitted to the United States Pharmacopeia, 1890. The German Pharmacopeia of the same issue also made this product official, but in a supplement, issued a year later, the Pharmacopeia Commission adopted the name *Scopolamine Hydrobromate* to replace "Hyoscine." The reason for this change is that nearly all the Hyoscine supplied by manufacturing chemists is made from *Scopolia Atropoides*, and hence "Scopolamine" more correctly indicates the source of the alkaloid. In this country the name Hyoscine is, moreover, alleged to be a trademark, and as a consequence it is sold at an exceptionally high price. C. F. Boehringer & Soehne, taking these facts into consideration, have recently put in stock this product labeled thus: "Scopolamine Hydrobromate, identical with Hyoscine Hydrobrom., U. S. P.," and their product (specify B. & S.) is obtainable in 5, 10, and 15 grain vials from wholesale druggists throughout this country at about half the price quoted for Hyoscine.

ILLINOIS CENTRAL HOSPITAL FOR THE INSANE.—I have repeatedly prescribed antikamnia for various neuroses with good effect. Recently prescribed it in a case of croupous enteritis, patient adult, highly nervous, and during continuance of paroxysms and preceding it is nervous and hypochondriacal, suffering intense pain. The case is one of long standing, and one where opium was objectionable, because of the tendency toward forming opium habit. However, opium has been used, but the effect of antikamnia has been more magical, more persistent, and followed by no digestive disturbance, as has been the case when opium was used. My directions have been to use antikamnia whenever a paroxysm occurs. Have also found it invincible in protracted neuralgia.

FRANK P. NORBURY, M. D.

JACKSONVILLE, ILL., September 19, 1891.

SANMETTO IN URINARY DISEASES.—Sanmetto is my medicine for all bladder and urinary diseases. I have used it in cases of fifteen years' standing where other physicians and medicines had failed—such as catarrhs, or any irritation of either bladder, urethra, or tubes running from kidney to bladder, in gleet resulting from gonorrhea or excessive drinking, or any other form of irritation of the urinary organs.

E. H. JONES, M. D.

SKYMOUR, IA.

I AM not in the habit of giving testimonials, and certainly would not do so until I had given the remedy a thorough and satisfactory trial. I have used Seng since first placed on the market, and in no case has it failed me. It is truly a physician's friend in all forms of indigestion and malnutrition, and especially indicated after malarial or typhoid fevers, malarial dyspepsia, and irritable stomach in pregnancy.

HOCKLEY, TEX.

O. M. BROWN, M. D.

JUSTIN HAYNES, M. D., Western Springs, Ill., says: I have a patient in my sanitarium who has scanty and painful menstruation; she is now taking her third bottle of Aletris Cordial with marked beneficial results. I have prescribed it for a number of patients outside of my sanitarium, and consider it a very valuable remedy for the conditions for which it is recommended.

WHOLESALE and retail druggists throughout the United States carry Boehringer's (B. & S.) products in stock to promptly supply all demands; and if information is wanted, inquiries addressed to the firm will receive prompt attention and response.

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Taken Wednesday morning. Time of exposure, one hour and forty minutes. Induction coil giving from 3''-4'' spark; excited by ten Grove cells. Taken on a Cramer crown plate. Fastest made by Cramer. Developed in pyro-developer.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXI.

LOUISVILLE, KY., MAY 30, 1896.

NO. II.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

PHYSIOLOGY AND PATHOLOGY OF THE MOTOR NERVE-CELL.

(*A Posthumous Paper.*)

BY JOHN FORD BARBOUR, M. A., M. D.
Late Neurologist to the Louisville City Hospital.

Schroeder van der Kolk, in his celebrated monograph on the medulla oblongata, compared the action of the nerve-cell to that of a Leyden jar, which automatically discharges itself when the tension of the electrical charge rises above a certain point; and this explanation seems to be universally accepted by physiologists.

Perhaps a better comparison for our purposes is that of the safety-valve on a steam boiler, which opens and allows the steam to escape when a certain pressure is exceeded.

The nerve-cell in health is capable of containing a certain amount of nerve force—has a certain retention capacity, as it may be called. This retention capacity varies greatly in different individuals, and at different times in the same individual. It is affected by such causes as

(a) *Race.* It is less in savage and half-civilized than in civilized races.

(b) *Climate.* Retention capacity is less in those living in warm climates.

(c) *Temperament.* It is least in the nervous and sanguine temperaments, greater in the bilious, and greatest in the phlegmatic temperament.

(d) *Heredity.* There are individuals who "go off at half-cock," whose actions rarely rise above the level of hasty reflex; and this characteristic is distinctly transmissible by heredity.

(e) *Sex.* The retention capacity is less in women than in men.

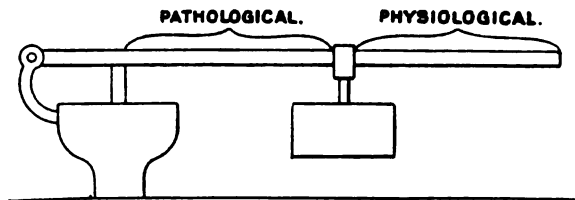
(f) *Age.* It is less in children than in adults.

(g) *Education.* It can be greatly increased by education. Herbert Spencer has stated that the measure of the mentality of an action is to be found in its distance from reflex action. The best educated man is the one who has most control of his actions; in other words, whose motor cells have acquired the greatest retention capacity.

Not only does this capacity of the nerve-cell vary thus greatly in different individuals within physiological limits, but it also varies greatly in the same individual at different times—these variations depending upon the relative states of nutrition of the nerve-cells.

It is impossible to draw any hard and fast line between the physiological and pathological variations in the retention capacity, since they are purely relative to the normal state of the individual in whom they occur. What would be a departure from the normal sufficiently great to constitute a disease in one man, may be a very slight variation from the normal in another. If a man who has hitherto shown perfect self-control, whose normal standard of retention capacity is high, suddenly becomes abusive, ill-tempered, and ill-mannered, it arouses the greatest suspicions as to his mental condition; whereas such conduct in another man does not even arouse surprise.

What has been said may be represented by a diagram. The amount of steam pressure which a safety-valve will stand is regulated by a weight which can be moved to and fro upon the long arm of the horizontal lever. When the weight is shoved close up to the valve, or even entirely removed, the steam escapes under low pressure. So when the retention capacity of the motor cells is lowered to a pathological degree, there is an automatic escape of nerve force.



In what manner is physiological discharge of the motor nerve-cells induced? How does the will set into operation the same muscular

blood those centers which it is desired to bring into play. The following are, in brief, the arguments in favor of this proposition:

The action of the brain as a whole is directly dependent upon its blood supply; it increases with its increase, diminishes with its diminution, and ceases with its cessation. What is true of the brain as a whole is also true of its parts. As each portion of the cortex has its peculiar function, the performance of this function is directly dependent upon the blood supply to its center.

Whenever the surface of the motor area is irritated, as by a spiculum of bone, spasms are produced in the corresponding muscles. This irritation provokes a discharge by inducing a hyperemic state of the nerve centers. An increase in the blood supply to any portion of the cortex throws it into action.

Lombard, Schuff, Broca, Voisin, and others have shown by delicate thermoscopic investigations that there is a rise of temperature in the functionary nerve center. It is natural to suppose that this is due to an increase in its blood supply. The only source of energy to the nerve-cell is the blood; it can not evolve nerve force or heat of itself and independently of the blood.

Some experiments of Ferrier's bear upon this point. In the *Medical Reports of the West Riding Lunatic Asylum*, vol. 3, he says:

"The faradization of the cortical substance immediately produces an intense hyperemia." The application of the electrodes produced epileptiform convulsions. "In all cases, whether the fits were partial or more general, the immediate antecedent was an excited, hyperemic condition of the cortical matter of the hemispheres. Not only was there a distinct interval between the application of the electrodes and the first convulsive movements; but there was occasionally a distinct interval of time after the withdrawal of the stimulation before the condition of the gray matter had reached the pitch of tension requisite for an explosive discharge. This, of itself, is sufficient to show that the effects were not due to conducted currents or direct stimulation of the motor nerves of the muscles, but to an abnormal excitability or irritability of parts, whose function, it might be inferred, was to initiate those changes which would result in the normal contraction of the muscles affected."

The peculiarities of the cerebral circulation have a significant bearing upon this hypothesis. The blood supply of the cortex is distinct from that of the central part of the brain. Moreover, each minute

portion of the cortex has its terminal arteriole, the capillary branches of which do not anastomose with those of the adjacent arterioles. Here is manifest a provision for flushing with blood the minutest motor center without in the least disturbing the circulation in the surrounding centers. When I will to bend my index finger I must be able in some way to set into action a very small portion of the cortex. According to the hypothesis advanced, I can accomplish this by dilating an arteriole of cortex, and thus bringing about the discharge of a small group of nerve-cells. Under any other hypothesis the peculiar arrangement of the cerebral blood-vessels has no significance.

It seems likely that the power of producing a voluntary discharge of the motor cells of the cortex resides in the frontal lobes. The reasons assigned by Ferrier for locating the volitional centers in the fore-brain, are briefly these: "Intelligence is proportionate to the development of attention, and it is also proportionate to the development of the frontal lobes. Irritation of these lobes does not provoke any motory manifestation; they are, accordingly, directive agencies, and expend their energy in producing changes in the centers of actual motor execution. Removal of them does not produce motor paralysis, but merely mental degeneration, resulting in loss of attention. The frontal lobes are imperfectly developed in idiots, whose power of attention is very weak. The frontal regions in animals become by degree weaker in proportion as the level of intelligence descends. Injuries to the frontal lobes will greatly lessen and frequently quite destroy the power of control."

In the celebrated crowbar case, where an iron drill was blown entirely through the frontal lobes by the premature explosion of a blast of powder, a decided impairment of will-power was noticed. At times the patient was exceedingly obstinate, though capricious and indecisive. He would make plans for the future, and forthwith reject them and adopt others.

"A man who had received a violent blow, which destroyed the greater part of the first and second frontal convolutions, lost all will-power. He understood what was said and acted as he was bid to act, but in an automatic, mechanical way."

M. Allen Starr has collected twenty-three cases of tumor of the frontal lobes; in over half of these there was loss of the faculty of control, change in character, inability to fix the attention.

The motor area is not under the exclusive control of the fore-brain, but is also excited to action by the hind-brain. Just as the motor cells of the spinal cord may be exploded voluntarily by an impulse coming down the lateral tract, or reflexly by an impulse coming from behind, so it is with the motor cells of the cortex; for the brain has its reflexes just as truly as the spinal cord.

The motor area is, as it were, a battlefield where the fore-brain and the hind-brain strive for mastery. The fore-brain represents will, reason, intelligence, foresight, education, self-control, the future; the hind-brain represents automatism, impulse, instinct, heredity, habit, emotion, fate, the past.

II.

What are the pathological conditions which affect the vitality of the motor cells? They are:

1. Alterations in the circulation, qualitative and quantitative anemia, hyperemia.

2. *Poisons.* Under the first head are included such causes as hydremia, narrowing of the blood-vessels from syphilitic endarteritis, atheroma, or arterio-capillary fibrosis; insufficient development of the arteries at the time of puberty; embolism, arterial and capillary; pressure of tumors, inflammatory exudates and blood clots (when pressure is gradually increased the circulation has time to adapt itself to the changed conditions, showing, as Niemeyer claimed, that pressure exerts a deleterious influence by producing anemia); thickening of the meninges up to a certain point produces irritation, hyperemia, spasms; beyond this point it causes anemia and paralyses; general anemia from loss of blood, etc.; impoverishment of the blood in acute diseases. Reflex causes probably act by producing circulatory disturbances. In animals irritation of the exposed intestines will cause the brain to blanch.

But of far greater interest and importance is the action of poisons upon the motor cells. Certain of these may be styled parenchymatous poisons, since they directly affect the gray matter of the cells. Most of these act equally upon motor or sensory cells, while a few have a special affinity for the motor cells; these again may be subdivided into the cerebral motor poisons and the spinal motor poisons.

It is hardly necessary to enter into the study of commoner poisons to any great extent, since every one knows their effect. Chloroform, ether, and alcohol are general cerebral poisons, affecting equally the motor and sensory cells. The latter performs for us a very curious physiological experiment—nothing less than a devolution of mind. It is interesting to notice how section by section the mind is taken down in a man who is gradually becoming intoxicated, in exactly the inverse in order in which it was evolved. In a few hours, under the influence of alcohol, a man will descend the steps of the pyramid of evolution, which it has taken millions of years to rear, and get down pretty near to the level of protoplasm. The power of attention, as Maudsley expresses it, is “the consummate flower of evolution,” and this power, as Rebot has shown in his monograph, “The Psychology of Attention,” is purely a motor function; hence this is earliest affected by alcohol. Next in order articulation is involved. We rarely reflect what an exquisitely delicate apparatus is that of articulation, and what an infinitely fine co-ordination must exist between the various organs. It is by far the most delicate muscular feat of which we are capable and the most recently evolved of our muscular actions; consequently it is early involved in intoxication. The consonants become difficult of utterance, the dentals being the first lost; then the drunken man finds it impossible to say distinctly, “What’s the matter?” but will eliminate the dentals and pronounce it “Wha’s ‘e ma’er?”

Another proof of this law of devolution is found in the fact that a skillful musician notices that a few glasses of wine, which is not sufficient to affect his articulation, will prevent his playing from being clean and accurate. Here, again, the latest acquired muscular skill is first affected. The alcohol continues to reach successively lower centers until such deep-seated processes as that of co-ordination in walking and standing, which have long ago sunk below the horizon of consciousness, are influenced. Finally the bulbar centers succumb.

Tobacco is also a general cerebral poison.

Opium likewise affects both motor and sensory cells. In moderate doses its immediate effect is to increase the retention capacity of the cells. Its after effect is greatly to lower it.

Cannabis Indica exerts its most marked effect upon the sensory cells, though at times it produces convulsions and catalepsy.

Chloral hydrate does not affect the motor system except in toxic doses.

In Calabar bean and strychnine we have two spinal motor poisons.

The metallic poisons, lead, mercury, arsenic, and copper, in addition to producing peripheral neurites, which may be of the ascending type, thus eventually involving the nerve-cells, may also act directly upon the motor cells of the brain and cord, as is shown by the occurrence of tremors, hemiplegia, violent and intractable chorea, etc.

But of far greater interest is the poisoning by the various toxines, whether produced within the body—the so-called leucomaines—or generated by invading microbes. This branch of etiology has been opened up only for a short time, but already it has proved a valuable and fascinating field of study.

Polio-encephalitis, according to Strümpel, is produced by a toxin which has a special affinity for the motor cells of the cortex—is a pure cerebral motor poison.

In acute anterior polio-myelitis the cells are destroyed in the anterior horn of the cord by a toxin which is a pure spinal motor poison. The cells most often affected are situated in the lumbar and cervical enlargements where the circulation is most abundant; those located in other parts of the cord may be temporarily overcome, but the poison rarely reaches them in sufficient quantity to destroy them. There is a temporary form of paralysis, also, which for a few days can not be distinguished from genuine polio-myelitis, and which is probably produced by the same poison in smaller quantity or lesser intensity. Here the motor cells are not destroyed, and complete recovery ensues.

It has been claimed that chronic polio-myelitis is likewise produced by a toxin; but there seems no proof for this, except the argument from analogy.

In acute myelitis the destructive process is so rapid as to favor the supposition that it is due to the action of a general spinal poison, destroying indiscriminately all parts of the cord. The causes usually assigned for this disease are merely those predisposing to disease of the cord in general.

Paretic dementia has also been classed among the toxin diseases. Régis and Chevalier-Lavaure, in a report made to the Congrès de Médecine Mentale, held at La Rochelle, August, 1893, support this view, and cite the results of injecting the urine of such patients into animals.

The toxines of typhoid fever, erysipelas, scarlet fever, measles, diphtheria, pertussis, diabetes, gout, and rheumatism, in addition to producing neurites, may, under conditions unknown to us at present,

act as central motor poisons. Cases of central paralysis from each of these have been reported. Malaria sometimes produces paraplegia. Tetanus, rabies, and possibly tetany, are due to microbic motor poisons. Dana has made a similar claim for certain of the tremors and a form of chorea. Syphilis, in addition to producing gummata, syphilitic arteritis, and the diffuse syphilosis of Heubner, seems at times to act directly upon the cells, as in syphilitic paretic dementia. Here the extraneural lesions found are generally admitted to be secondary in character. Lastly, the poisons of grippe undoubtedly affect the vitality of the motor centers.

The investigation of the actions of the various poisons upon the nervous system is the most important field open to the neurologist.

III.

Let us apply these facts of physiology and pathology to the study of certain forms of disease.

Chorea is a condition in which the retention capacity of the motor cells is greatly reduced. To return to our simile, the weight is shoved up close to the safety valve, so that the steam escapes under very low pressure. This is brought about by so many different causes that we must consider chorea as much a symptom as is tremor. Just as modern chemistry has succeeded in decomposing many substances which were formerly regarded as simple bodies, so a closer analysis has divided the inco-ordinate clonic muscular spasms, once included under the title of chorea, into several groups. Von Ziemssen first lopped off chorea major, showing that it was hysteria or insanity. Weir Mitchell added habit chorea. In addition we have chorea minor, or Sydenham's chorea, and a large family of affections described by Lannois (*Thèse d'agrégation*, Paris, 1886,) as the "pseudo-choreas." Under this head are included *salaam tic*, the electrical choreas of Dubini and Bergeron, choreas of the larynx and diaphragm, *tic convulsif*, *paramyoclonus multiplex*, *rhythmical chorea*, *athetosis* and the *fibrillary chorea* of Morvan. Moreover, there are several varieties of chorea minor—the "limp chorea" of West ("chorei molle" of the French)—*hemichorea*, and the hereditary chorea of Huntingdon.

Owing to the lowered resistance to discharge, the slightest sensory incitement will serve to bring it about. The constant inward stream of sensations during waking hours, and even the unnoted vis-

ceral sensations excite the enfeebled and irritable motor cells to action. Hence the importance, in severe cases, of cutting off as far as possible such irritations; hence, also, the quietness of the patient during sleep.

Chorea may be spinal in origin, as is shown by the investigations of Wood, Chanveau, Legros and Onimus, Victor Horsley, and Putnam.

The following are some of the causes which have been found for the loss of retention capacity on the part of the motor cells; it will be noticed that for the most part they can be classed under the heads of circulatory disturbances or poisons: plugging up of the blood-vessels by capillary emboli (Kirker, Broadbent, Hughlings Jackson, Bastian, Tuckwell, Ogle, Barnes, etc.); thickening and bony induration of the meninges (Frerichs); hyperplasia of the connective tissue of the brain, chronic interstitial encephalitis (Rokitanski, Golgi); the same condition in the cord (Steiner, Meynert, Elischer); inflammatory exudations from the meninges; thickening and deposit of lime in the adventitia of the blood-vessels of the corpus striatum, optic thalamus (Elischer), and cord (Rokitanski, Steiner, Meynert, Dickinson); capillary embolism of the cortical blood-vessels (Elischer). Hyperemia of the brain and cord has been found repeatedly by such observers as Golgi, Elischer, Romberg, Ogle, Gray, DeBeaurais, Hine, Brown-Séguard, Lockhart Clarke, Steiner, etc.

Of course, it is impossible to say just what the relation of these lesions is to chorea—whether they are cause or effect, or merely coincident.

Angel Money found that by injecting arrow-root and carmine into the carotid arteries of animals, choreiform movements were produced.

Beneke's researches show that as children approach puberty the development of the arteries does not keep pace with that of the rest of the body, and the female heart remains both relatively and absolutely smaller than that of the male. Young girls have likewise to contend with the drain of menstruation. Retention capacity is normally less in women. These four facts of narrow arterial lumen, insufficient heart, menstrual drain, and normally low retention capacity, serve perhaps to explain the greater frequency of occurrence of chorea in girls. Out of 1,348 cases, 366 were males and 982 females.

The toxins of any of the acute infectious diseases may produce chorea, and it may likewise be caused by metallic poisons.

As we say the tremors, the epilepsies, so we must in future speak of the choreas. This will serve the useful purpose of directing attention

to the different etiological factors lying at the bottom of these various forms, and will clear the way for rational treatment.

Hysteria is a disease in which the control of the fore-brain over the motor area is lost, and just as cutting off cerebral influence from the spinal cord heightens its reflexes, so here the cerebral reflexes are increased, and every cerebral incitement arouses its corresponding reflex. This is why moral treatment is of such importance in these cases; it is necessary to put the patient through a course of mental gymnastics in order to restore the domination of the fore-brain.

In the occupation neuroses the retention capacity of certain centers is lost from prolonged overuse, so that there is a spasmodic ejaculation of nerve force when they are brought into play.

This subject might be discussed at much greater length, but it is left to the reader to apply these principles to other diseases.

LOUISVILLE.

PROPHYLAXIS AND TREATMENT OF ACUTE INFLAMMATION OF THE MIDDLE EAR.*

BY SAMUEL G. DABNEY, M. D.

*Professor of Physiology, and Clinical Lecturer on Diseases of the Eye, Ear, Nose, and Throat in the
Hospital College of Medicine.*

The most frequent causes of inflammation of the middle ear are:

1. Adenoid growth in naso-pharynx. According to Dench they are responsible for more than one half of the affections of the tympanum. They are injurious, first, by obstructing the passage of air through the eustachian tube, thus causing the drum membrane to be pushed in by the pressure of the atmosphere from without, and, as Politzer says, leading to serous exudation from rarefaction of air in the tympanum. Secondly, by causing inflammation of the naso-pharyngeal mucous membrane, which extends into and through the eustachian tube; and thirdly, perhaps, by collecting and retaining micro-organisms which subsequently make their way into the ear. This condition is most prone to cause subacute and chronic ear disease, but sometimes gives rise to frequently returning acute attacks.

2. Nasal obstruction, due usually to hypertrophy or to deviated septum.

* Read before the Louisville Medico-Chirurgical Society March 21, 1896. For discussion see p. 420.

3. Naso-pharyngitis without obstruction, rarely.

4. Enlarged tonsils. Not so important, however, as the adenoid with which they are frequently associated.

5. Nasal operation, especially on the septum. Few surgeons with considerable experience in this line have not occasionally seen acute aural inflammation produced.

6. Grippe. The otitis which follows it is remarkable for the unusual tendency to mastoid involvements.

7. The infectious diseases. Scarlet fever produces ear disease more often when it is associated with diphtheria. In such cases the microscope has shown the streptococcus pyogenes and the Klebs-Löffler bacillus in the aural discharge. Tubercular inflammation of the ear is remarkable for the absence of pain and for its obstinacy. Acute suppuration of the tympanum sometimes complicates pneumonia, and the diplococcus of this disease has several times been found in pus from the ear. A recent writer suggests that the cerebral symptoms of pneumonia may sometimes be due to an overlooked otitis media and details several cases in support of this view.

8. Traumatism. In my own experience I have seen acute suppuration produced in two cases by a fall on the head, rupturing the drum membrane, in one by a blow on the ear with a fist; in one by a slap of the hand; one from a blow with a snow ball, and several from the improper use of the nasal douche.

9. Bacteriologists have found several organisms in the aural discharge. Moos states that the streptococcus pyogenes and the diplococcus of pneumonia are most frequent.

Many cases of acute ear disease follow exposure and acute rhinitis.

With this review of the etiology, the principles of prophylaxis are more clear.

Obstructions in the nose and naso-pharynx should be removed. Hypertrophy of the turbinates and septal thickening are most common in the adult, adenoid more common in children. For hypertrophic rhinitis the treatment is to pin down the hypertrophied membrane either with electro-cautery or chromic acid after thorough cocaineization. Posterior hypertrophies may be removed most rapidly with the snare, but secondary hemorrhage is sometimes troublesome. The electro-cautery, less speedy in its results, saves this annoyance. Where the space between palate and posterior pharyngeal wall is narrow, and where the patient can not control the palate, it should be held forward either with

White's palate retractor or a soft catheter carried through the nose and tied over the lip. I generally use the palate retractor. If 10 per cent cocaine is applied with a curved probe to the posterior surface of soft palate, these procedures, while disagreeable, are not usually very painful and make posterior rhinoscopy easy.

Hypertrophied masses on the edge of the turbinates are best removed with snares or scissors. Operation for adenoid is most often called for in children. After considerable experience both with an anesthetic and without, I am disposed to think that in marked cases and in the average child it is best to give an anesthetic. The operation is more speedy without and more thorough with general anesthesia. I have never seen any tendency to the blood's running into the windpipe. It does go down to the stomach and is often vomited afterward. When the bleeding is free I let the child's head hang over the edge of the table a little. Either with the anesthetic or without, I am in the habit of using first the forceps and then the curette. Without anesthesia the palate is held forward by the palate retractor; with anesthesia, either by tying it or with the forefinger of the left hand, which also guides the forceps and curette. In older children and adults the operation may often be done in clear view with the rhinoscopic mirror, but in most cases of adenoids this is not possible.

Enlarged tonsils should be removed with the guillotine. Anesthesia is not desirable, but where an adenoid is also to be removed it may be employed, and both operations done at the same time. In this case the faucial tonsils should be removed first, or the bleeding from the adenoid will obscure the view. It is my custom to remove the faucial tonsils first without an anesthetic, and later the adenoid with or without one, according to the amount of growth and the wishes of the family. Dr. Barkan, of San Francisco, has reported a case of fatal hemorrhage from removal of adenoid and faucial tonsils. There was no hemophilia. A few other fatal cases have been reported from adenoid operations. Rarely acute inflammation of the middle ear follows. It is well to caution the patient against violent blowing of the nose for a few days, and to instruct him to clear the naso-pharynx by hawking so as not to blow any thing into the ear.

After nasal operations, either upon the turbinates with the electro-cautery, or upon the septum with saws or cutting instruments, a mild sepsis is occasionally and an inflammation of the ear more rarely observed. The prevention of these results depends on careful attention

to asepsis of the wound. It should be carefully cleansed once daily by the surgeon until the symptoms of reaction have subsided, and every few hours the nose should be sprayed by the patient with an alkaline and antiseptic wash, such as Seiler's solution.

Ear complications in the infectious diseases are to be prevented by cleansing sprays to the naso-pharynx. Care should be exercised in the use of the nasal douche or syringe in all cases, but especially in scarlet fever and diphtheria.

Finally, there is no doubt that a mild inflammation of the ear is sometimes made more intense by infection from the surgeon's instruments. As stated by Hollinger, the ear speculum is especially dangerous in this respect. A little infectious matter remaining on it is almost certainly pushed down into the ear by the cotton-wrapped probe. This last instrument may be made aseptic by dipping the cotton in an alcoholic solution of boric acid and holding it in the gas flame until the alcohol is burned out. The boric acid prevents the cotton from burning. For the cleansing of instruments I find convenient a gas stove with a pan of water on it kept under my table. Boiling may thus be accomplished in a few minutes and with very little trouble. For routine use, however, both in my office and clinic, I trust to immersion for a few minutes in alcohol and washing in hot or cold water. I will be glad to hear from the bacteriologists present whether this is sufficient.

One disease of the ear I believe I have been guilty of transferring from one patient to another before I understood how readily this could be done. This is furuncle of the auditory canal—not a dangerous but a painful and sometimes a most persistent affection.

Treatment. 1. In acute inflammation, where pain is absent or slight, the chief symptoms are the impaired hearing, ringing in the ear, far away sound of the patient's own voice, a stopped up feeling in the head, and occasionally, in nervous subjects, decided mental oppression and anxiety. These conditions depend chiefly on obstruction in the eustachian tube. Inflation with the Politzer bag, cleansing sprays to the nose and naso-pharynx, and where secretion is abundant nitrate of silver solution to this space, are the simple and usually efficient remedies. I often give antikamnia and bromide of potash at bedtime to allay nervousness. Cases of this type are sometimes associated with the uric-acid diathesis and attended by gouty or rheumatic symptoms. Paracentesis to evacuate serous or mucous accumulations in the ear is according to the authors often indicated, but in these painless affections

I have not seen cases which seemed to require it. It must be confessed that the simple measures above suggested are not always satisfactory, and some of these cases persist in a very aggravating way. Delstanche's aural masseur, with which the drum membrane and ossicles are drawn out, is often valuable. In several cases it has proved more efficient in my hands than inflation. The camphor and iodine vapor (one dram of camphor in one ounce of tr. iodine) applied through the eustachian catheter is sometimes useful.

2. Acute inflammation attended by sharp pain but without discharge. This type may be either acute catarrhal inflammation or the early stage of acute suppuration. The Politzer bag should not be used where there is much pain or when it has just subsided. Though occasionally, where the pain is due to tubal obstruction, it will give relief, yet in the majority of cases of acute inflammation of the tympanum its use at this stage increases the pain and throbbing. Of course the catheter should not be used. The indications are to lessen pain, and if possible prevent suppuration. The remedies are, first, hot applications. Generally, hot water run into the ear gently with the fountain syringe is best. The piston syringe is apt to cause pain. The hot water bag is useful. Poultices may be applied with advantage when the pain is over the mastoid and around the ear; their long-continued use over the ear itself is said to be injurious by producing too great destruction of the drum membrane. Second, internal treatment is often indicated. There is usually fever of from 100° to 103° . A free purgation and phenacetine and Dover's powder given in the beginning are of much value. Third, leeches, from one or two in the child to three or four in the adult, applied just in front of the tragus, often subdue the pain when other things fail. The artificial leech may be used. Fourth, the nose and naso-pharynx should be kept free from excessive secretion with an alkaline and antiseptic spray. Medicines dropped into the ear at this time are of questionable utility. Atropia and morphia solutions and cocaine are often prescribed, but with an intact drum membrane I do not think they accomplish much. Fifth, paracentesis of the drum membrane. Just how soon this is indicated is a point upon which there is some difference of opinion. Dench, in his recent text-book, and in a paper read before the last meeting of the Mississippi Valley Medical Association, declares that it is never wise to wait for spontaneous opening, as the thin cicatrix resulting from tissue necrosis may result in impaired hearing in later years. He even claims that early

incision often cuts short an attack. Roosa recommends paracentesis when the appearances indicate that the drum membrane is about to rupture, or if the pain be not quickly subdued by leeches. Politzer advises opening when there are symptoms of pus in the tympanum, when there are evidences of the formation of abscess in the mastoid, and when sleep-disturbing pain continues in spite of local and internal medication, even when the membrana tympani is not bulged. Neither of these writers speak of the subsequent disadvantage of spontaneous opening, nor of the power of early incision to cut short an attack. Usually I do not puncture the drum membrane, but of course do so where there are evidences of pus retention which nature is slow to evacuate.

3. Acute inflammation, with discharge of pus. The douche of a warm solution of the bichloride of mercury, one grain to the pint, should be used every two hours, with internal medication to allay pain if needed. Only when the acuter symptoms have subsided should inflation with the Politzer bag be begun and powders insufflated. Then, after cleansing the ear with the syringe, the canal should be filled with the peroxide of hydrogen, the bichloride solution, and, with the head turned to the opposite side, the ear inflated. After careful drying, powdered boracic acid and resorcin (eight parts of the former to one of the latter) should be blown into the canal. S. S. Bishop recommends aristol as being superior to boric acid.

The limits of my paper prevent further discussion of this part of the subject and of the complications which sometimes arise. Confinement for a few days or longer in a warm room with rest for mind and body will do much toward preventing mastoid disease and other sequelæ:

LOUISVILLE.

MENTAL IMPAIRMENT RESULTING FROM THE USE OF THE BROMIDES IN EPILEPSY, HYSTERIA, ETC.

BY JOHN P. STEWART, M. D.

Assistant Physician to "The Stewart Home," a Private Institution for the Care and Training of Persons of Backward Mental Development and the Treatment of Nervous Diseases.

It is not my purpose in this article to bring forth any new treatment for epilepsy, or to report any permanent cures, but to urge the profession to be more conservative in the use of the bromides, not only in the treatment of epilepsy, but in other diseases demanding their use, and also to call the attention of physicians to the fact that epileptics can not be satisfactorily treated outside of an institution especially adapted to them unless a systematic care be strictly followed; and I may say here that this has been found an impossibility, owing to the fact that epilepsy is not a disease of a few months' duration but one of years.

I believe that in a majority of cases of epilepsy treated by the practicing physician more harm has been done to the patient than good. This may be a broad assertion, and one perhaps I should not make, but I am in a position to see the results of the treatment commonly followed by physicians.

This most unfortunate of diseases has not been given the attention or study it should have; however, I am glad to see now a new interest awakening in its behalf, special institutions, sanitariums, and colonies being built for the care and treatment of epileptics.

The medical attention is by no means the most important in the treatment of epilepsy, for without regular habits, special diet, quiet amusements, and that personal oversight of the physician himself which is impossible to be given at home, the result is unsatisfactory.

Is it not true that many cases are treated without the attending physician ever having seen the patient in an attack? Can he determine, if it be idiopathic, whether its source be central or peripheral; or whether it be produced by traumatism? Physicians as a rule make it too common a practice in prescribing the bromides. They do not seem to realize how very powerful they are in their action, and that they must necessarily have a very irritating effect on the system. I should be exceedingly careful in prescribing them in any case short of grand mal, and it would then be with the knowledge that other remedies have failed. The mental disturbance and decay which are the result of the disease are only hastened by the inordinate use of the drug;

besides the gastric distress and cardiac depression produced by it often excites the convulsions.

I have a mentally defective case now under my care that commenced having convulsions at the age of two years. The family physician was called in, diagnosed the case epileptic, and prescribed bromide of potassium with increased doses daily. This child, exceedingly bright in intellect at the time, has now a very defective mind. In my opinion this was not a case of epilepsy. I judge that the convulsions were caused (from the history the mother has given me) by gastric irritation produced by improper feeding, and the proper treatment should have been to regulate the diet. I also believe the mental impairment was the result of the long-continued use of bromide of potassium. The mother told me that the physician had never seen the child in one of the attacks.

It has been a question with me which, in the number of cases under my care, has done the greater harm, the disease or the remedy.

To further illustrate my point let me cite a case, that of a young lady who came under my care about a year ago. She had been suffering from hysteria, and the physician gave, as a nerve tonic sedative, bromide of potassium in enormous doses. This was continued until she came to the Home, almost a mental and physical wreck. I immediately stopped the bromide, regulated her diet, and gave her a tonic. She left us in six months entirely well.

In another case, that of a young man of fine mental capacities, who came under my care about two years ago and is still at the Home, the diagnosis was epilepsy, and he had been taking large doses of bromide of potassium. His physical condition was so weak when he came that he could hardly walk, and his mind had been injured to such an extent that it was impossible for him to remember one moment what he had said the moment before. The history of the case has proven to me beyond a doubt that this also was not a case of true epilepsy, but one of hystero-epilepsy, caused by undue excitement over an election in which he was one of the candidates. By proper treatment and regulation of diet this patient has improved wonderfully, both mentally and physically.

But this is not all, I could report a number of cases now under my care that would prove the mental impairment was the result of the drug and not of the disease. In almost all works on the treatment of epilepsy the bromides stand par excellent as the remedy, but none lay

stress on the fact that their indiscriminate administration will likely be attended with injury both to the mental and physical condition of the patient. The only aim of these writers seems to be the cure of the disease, no matter if it leaves the patient in a state of complete imbecility. I call on all to be more conservative, to use better judgment, both in the diagnoses and treatment of cases which demand the use of the bromides.

I may say further, that I believe there has never been a case of epilepsy of long standing cured by the use of the bromides that did not leave the patient in a state of mental impairment, and physicians should bear in mind that when using them it is at the expense of the mental and physical powers.

I do not mean to condemn the bromides, for I believe they have come nearer aborting the disease than any other remedy, still, in order to prevent mental decay, they must be used with greater care, and the idea that they are harmless should be abandoned.

FARMDALE, KY.

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, March 21, 1896, Dr. W. L. Rodman, President, in the chair.

Presentation of Clinical Cases. Dr. J. M. Ray: This gentleman I saw for the first time last Sunday morning. He came to me with the history that his sight had been failing him for six months. He does not know exactly how much whisky he drinks, but often takes as many as fifteen small drinks during a day; besides a dozen or more cigars were smoked. Four weeks before I saw him he had an attack, probably brought on by excessive drinking, during which he took large quantities of quinine and bromide of potassium. His vision has very much diminished since that time. He had decided nystagmus, and on this account it was very hard to get a good ophthalmoscopic examination. Vision in one eye was reduced to counting fingers at one foot, in the other eye to $\frac{8}{200}$. I dilated the pupils, but failed to find any pathological condition in the fundus oculi. I had him taken to the infirmary,

gave him a purge, and commenced hypodermic injections of strychnine, stopped smoking and drinking. He has improved rapidly; to-day vision in the eye which had only $\frac{2}{80}$ is perfect; in the other eye it is about $\frac{10}{80}$. To-day I mapped out his field and find that in the left eye he has a normal field of vision. There is, however, a diminution in his central field for red. In the right eye he has a very decided central scotoma for red, and at the same time his whole field of vision is contracted, even for white. Now an examination with the ophthalmoscope shows decided evidence of a triangular atrophy of the disk downward and outward—the so-called papulo-macular fibers.

There are several points of interest in the case. It is recognized that the point in the diagnosis of so-called amblyopia potatorum is a central scotoma for red; another point is that the extent of the field of vision is normal. This man has a contraction of the field and a central scotoma for red, so that his condition can not be accounted for by the tobacco and alcohol amblyopia alone. I believe that the contraction of the field is due to the large doses of quinine taken, and in addition to this presents the characteristic symptom of so-called retrobulbar neuritis. He has some central brain disease that now is unrecognizable.

Dr. Wm. Cheatham: I believe, with Dr. Ray, that he has not the so-called amblyopia potatorum, but an amblyopia due to some mixed cause, for the reasons he has given. I have seen, in some of these cases, the vision jump almost to perfect after one inhalation of nitrite of amyl. We can also improve the vision rapidly in some of these cases by a large injection of strychnia.

Dr. S. G. Dabney: The lesion in these cases is generally believed to be due to retrobulbar neuritis of the axial fibers of the nerves which emerge on outer side of papilla. This accounts for the paleness limited to that region. Most of them do well under withdrawal of the cause and hypodermic injection of strychnine. But where the cause has acted for a long time they go on to partial atrophy. Although there are some unusual features in the case, I believe the trouble is due to tobacco. I have never seen a case in which the vision was reduced so low. The nystagmus is interesting, developed as one of the symptoms of the disease.

Dr. Ray: DeSchweinitz, in a recent monograph, goes very extensively into the subject of toxic amblyopias. His opinion is not so favorable. He says that there is always a change in the bundle of

nerve fibers in the macular region, that the condition improves up to a certain point and then remains stationary. I believe I have seen cases that presented all the symptoms of toxic amblyopia from alcohol and tobacco in the chronic form recover without organic change and without defect in vision beyond, probably, central color blindness for red.

Exhibition of Pathological Specimens. Dr. Thomas Hunt Stucky: Some three or four weeks ago I was called to see a young man suffering from typhoid fever running the usual course. At the end of the second week there was marked delirium, and it became necessary to introduce a catheter. I came in contact with something hard just behind the glans, but finally passed a small catheter and relieved him. A few days afterward he said this hard place had been in his penis fifteen years, and that every time he urinated he was obliged to slip it back. In sexual connection before emission he would have to withdraw. It was thought best not to do any thing until recovery from the typhoid fever. In the mean time an abscess formed and this stone passed away.

Dr. A. M. Vance: I would like to mention a very similar case which I saw several years ago. A little child, two years old, had difficulty in passing water. There was marked evidence of infiltration of urine and a highly edematous prepuce. I succeeded in getting into the bladder with a simple lithotomy staff. The child died twenty-four hours later. *Post-mortem* examination revealed a calculus in the same locality as in Dr. Stucky's case.

The essay was read by Dr. S. G. Dabney: subject, "Prophylaxis and Treatment of Acute Inflammation of the Middle Ear." [See page 410.]

Discussion. Dr. Ray: The essayist has gone pretty well over the territory embraced in the subject of middle ear diseases proper, and their treatment, therefore I do not know that I could add much to what has been said. There are points in the paper which I indorse and others which I think are questionable. In the first place he gave a synopsis of adenoid disease and the manner in which these growths are liable to influence the middle ear. This is a subject upon which I have written somewhat. I have operated upon many cases in which ear disease was present and others in which the ear was not affected, and I have come to the conclusion that the best instrument to be used in removing

adenoids is the curette; a curette with the proper shape and curve so that you can get well up to the septum; with this you can remove more adenoid tissue than with forceps. I am of opinion that the majority of forceps in use are dangerous. This was impressed upon me not long since when I saw the operation done under an anesthetic. The operator, after taking three or four nips with the forceps, threw quickly into a basin what looked to me like a piece of the vomer. In operating under an anesthetic with forceps I do not see how it is possible to avoid the orifice of the eustachian tube, or prevent grasping the free edge of vomer. Of course, if after using the curette you felt with the finger a small amount of tissue left there could be no question as to the propriety of removing it with forceps. I have never had any serious hemorrhage or inflammatory trouble following.

There is no question that the relapsing attacks of acute middle ear trouble in children are due to adenoids in the naso-pharynx in a very large percentage of cases. It has not been my experience that the faucial tonsils, unless excessively large and subject to frequent recurring attacks of inflammation, are so apt to give rise to ear trouble.

With reference to puncturing the drum membrane, it has been my experience that the cases of fluid accumulation in the middle ear require incision of the membrane; and whenever I find the membrane bulging I puncture and inflate the middle ear. With reference to local applications, I think there is no doubt that hot applications give more relief, especially in adults, when followed by the application of one or two leeches. I am in the habit of using carbolic-acid solutions. These I think possess an advantage over bichloride of mercury in that they have a local anesthetic action. A drug that is very much misused by the general practitioner is peroxide of hydrogen. As long as the symptoms are acute peroxide of hydrogen does harm. As soon as there is evidence of accumulation in the middle ear we should give drainage and use nothing which would prevent free drainage. It has been my practice never to use a catheter in acute middle ear disease. Many practitioners fill an ear with pulverized boric acid as soon as they notice a discharge. This is a serious mistake, powders should not be used until all pain and swelling are gone, otherwise they will act as an irritant and interfere with free drainage.

Dr. Cheatham: Dr. Dabney has left very little for us to say. It is very unusual to have the disease primarily, but we may have it extending from the external auditory canal without any eustachian tube trouble. Where

bone inflammation is primary it is in the majority of cases tubercular. We see very little of trauma here, but in the East they see a great deal of it from sea bathing. Coming down to the treatment of the nose and pharynx in these cases, I find I am using the galvano-cautery less and less every year, and depending more and more upon constitutional treatment. In many of these cases much can be accomplished without so much local treatment of the nose. In removing adenoids I scarcely ever use an anesthetic. I usually have the patient held, and have very little trouble in the operation. If the child struggles I confine the arms by means of a towel and my assistant holds him firmly.

I think cleansing the nose and throat in scarlet fever is of great help; and I have no doubt that in this way sepsis can to a great extent be prevented.

Poultices I use a great deal in acute inflammations of the middle ear. An objection to the poultice is that it not only softens the drum membrane but also produces a troublesome eczema, a chronic inflammation of the auditory canal. Opium is of use in the hands of the specialist, but the man who is not capable of seeing when there is fluid in the ear should not use opium. I depend a great deal upon leeches in the acute stage, upon drops containing cocaine, morphia, and atropia. I have numbers of people who have children with relapsing earache, who have these drops, and the instant the child has earache they put them into the ear after warming them; I am not sure that hot water will not do as well; afterward I inflate the middle ear. I agree with the doctor as to the use of water. Take a suppurating sinus in the middle ear, how can it be cleansed without water? My objection to the cotton mop is that you are liable to irritate the canal and leave a furunculosis. The action of peroxide of hydrogen is both chemical and mechanical, cleaning out the pockets and destroying pus. Another means of draining is by small strips of iodoform gauze made into small rolls and passing them into the middle ear. Much more can be done with these than with powders which are liable to stop up the canal. After the acute stage is over I use boracic acid dissolved in alcohol dropped into the ear after thorough cleansing. I think the doctor should have differentiated between inflammations of the attic, and other parts of the middle ear; according to recent pathology they are quite distinct.

Dr. Dabney (closing the discussion): I am much obliged to the gentlemen for the free discussion of the paper. In regard to the treatment of adenoids, it seems to me that the danger is in the

operator and not in the instrument. No one with the child well under an anesthetic and with his finger directing the instrument is likely to do any harm. I do not see how it is possible with this precaution to cut the eustachian tube. The most common accident is the one Dr. Ray referred to—carrying the forceps so far forward that it comes in contact with the posterior border of the vomer, but I do not see how this can occur if the instrument is guided with the finger. I invariably use the curette also, and if I had to use one instrument alone I would use the curette. In regard to the combined operation for enlarged tonsils and adenoids, I do not like to combine the operation, doing both at the same time, yet I do not think there is any more danger of sepsis or any other accident in doing both operations at the same time. I have done both operations a number of times without any bad results whatever.

I agree most thoroughly with Dr. Cheatham as to cleansing in scarlet fever, and believe that it can be most thoroughly done by irrigation of the throat with a fountain syringe. Practitioners who have had no experience with this method would think that a child would gag and swallow a great deal of the solution, but a trial will show that this is not the case.

Free purgation and a good night's rest are of great value in the beginning of acute middle ear trouble, and I think we make a mistake if we do not give a child opium in the early stage. In regard to the drops, I think the benefit obtained by Dr. Cheatham is chiefly from the heat. The pain in these cases is like that of a periostitis; and I do not think that a medicine dropped upon the drum membrane would have any effect. My experience is that heat is of more value than morphine and cocaine, which are so widely used.

After the acute stage has subsided I am very fond of alcohol and boric acid. Like Dr. Cheatham, I do not believe we can discard the douche and syringe in the treatment of these cases. I never use the catheter in acute middle ear disease; the Pulitzer bag should not be used so long as pain and throbbing are present.

In regard to the cautery and snare in post-nasal hypertrophy, my experience is that the hemorrhage after snaring in these cases is secondary. I have had several cases in which I have snared off these growths very slowly. In two or three of them the patients have returned after five or six hours with severe hemorrhage, not alarming but very troublesome.

JOHN L. HOWARD, M.D., *Secretary.*

foreign Correspondence.

LONDON LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

Sickness in Madagascar; Roentgen Apparatus in the Field; Diphtheria in London; Life Saving Exhibition; The Late Baron Hirsch; Spontaneous Dislocation of the Hip; Smallpox at Gloucester; A Collection for Guy's Hospital; Red Cross Societies.

According to an official account the deaths of French soldiers from sickness in the Madagascar campaign was terrible. While the enemy only killed seven and wounded ninety-four, 6,000 died from disease, and 15,000 went on the sick list. This high percentage of mortality was eclipsed in 1802, in the Jawaca expedition, for out of 60,000 men who sailed from Brest, 50,000 died from yellow fever, and of the 10,000 men left, but 300 got back to France, and then only after a lapse of seven years. The 50,000 men died of yellow fever in four months.

Two full equipments of the Roentgen photographic apparatus have been dispatched up the Nile for use with the expedition which is advancing upon Dongola. It is hoped the new photography will be found of great service in military surgery.

In London the increase of deaths due to diphtheria has been very striking of recent years. The death-rate has risen from one hundred and twenty-two in the decade 1871-80, to five hundred and forty-three in the five years, 1891-95. It has been noticed that the spread of diphtheria coincides with the growth of the Board School System. Dr. Thorne Thorne some years ago laid stress on this factor, and it has since been worked out more thoroughly by Mr. Shirley Murphey, Medical Officer to the London County Council. Last year Dr. W. R. Smith was instructed by the London School Board to go into the subject and report upon it. Mr. Murphey's figures had shown that since the Elementary Education Act and the foundation of Board Schools, diphtheria had exhibited a tendency to affect children of "school age," that is between three and ten years old. Dr. Smith lays stress upon the fact that "school age" does not begin at three, but at four years, and that when the notifications for each year of life are gone into they show an increasing liability to diphtheria up to "school age" and a declining liability in subsequent years. Dr. Smith also accentuates the fact that in Berlin the greatest incidence of the disease occurs at the same period of life as in London, although the age of compulsory school attendance is two years later, Dr. Smith concluding that age has much more to do with the matter than school influence.

The full extent of his winnings on the turf which the late Baron Hirsch presented to the London hospitals, exceeded £58,000. Just before his son died, some few years ago, the Baron telegraphed from Paris to Strasbourg to a famous specialist, asking him to come at once by special train, with a consulting fee of £4,000 to visit the poor sufferer, but the visit unhappily proved of no avail.

A life-saving exhibition in aid of the Guy's Hospital Fund will be held in July, with the co-operation of the St. John's Ambulance Association and the Life Saving Society, when will be displayed the many appliances and inventions to prevent loss of life from accidents of all kinds. Many other attractions will be added, such as demonstrations by First Aid Classes and lectures on hygiene by prominent professors. Concerts are to be given and a ladies orchestra will perform at intervals.

Dr. Fenning recently has had an interesting case of spontaneous dislocation of the hip under his care. The patient, a naval officer, stated that one night when in bed in hospital at Malta, he was suddenly seized with severe pain in his right thigh and hip, and when he got up he was very lame. The pain was diagnosed as sciatica and treated as such. When seen by Dr. Fenning he was still lame and had a great deal of pain, with a temperature of about 100° F. It was noticed that the pain was as bad in the anterior crural nerves as in the sciatic. As the patient stood on the left foot the right one was a good deal in front, the knee bent and the body bowed, when standing on the right foot the left heel did not touch the ground by two or three inches, the trochanter was absent from its normal place. Having diagnosed dislocation of the head of the femur, it was decided to attempt its reduction by Bigelow's method. This was successfully performed under anesthesia, the head of the femur re-entering the acetabulum with a loud snap. Three days later the patient walked all right without any lameness, and there was no pain. The patient when in hospital at Malta was suffering from erysipelas of the face.

The epidemic of smallpox at Gloucester has now lasted for 15 consecutive weeks. There has been notified officially 1,502 cases. As was anticipated from the large amount of vaccination, there are slight indications of abatement in the number of fresh attacks. It is believed that vaccination at the rate of 5,000 cases per week is now in progress, but a large amount of this is re-vaccinations, and it is feared that, out of some 10,000 children who had not been vaccinated at the commencement of the epidemic, there remain at the lowest estimate some 3,000 unvaccinated. Dr. Sweeting, the well-known authority on smallpox, has been down at Gloucester advising the local sanitary authorities, and Dr. Francis J. Bond, one of the most expert medical officers of health, has undertaken to superintend the whole organization as to vaccination.

During the year 1895 there were registered in England 568,758 deaths and 921,860 births. The estimated population in the middle of the year was 30,394,078. In London last year there were 133,715 births and 85,246 deaths.

An effort is being made in some of the London clubs to raise £1,000 each for the endowment of a bed at Guy's Hospital. At three the sum was forthcoming in a few days, viz., the Bachelor's, the Turf, and White's. A great effort is now being made at the Carlton and the Reform with the same object.

Dr. William Lockhart, the first medical missionary to China, has died at the age of eighty-five. In 1861 he commenced the first Protestant Mission in Peking, obtaining the privilege of settlement in the imperial city in consequence of his official position as physician to the British Embassy, which was established there in that year. He was the author of a number of translations for Chinese medical works on midwifery, inoculation, etc.

Dr. John Macintyre, in a recent address upon the Roentgen rays in surgery, said his work had been mainly done with an Apps's coil, and the best results he had obtained with Newton's tubes, using potassium platino-cyanide and barium platino-cyanide screens for the cryptoscope. Dr. Macintyre considers that photography by means of the Roentgen rays is much in advance of cryptoscopy. He hopes at the next meeting of the British Laryngological Association to place photographs and appliances on view which would show that the X-rays were going to be very useful in laryngeal work.

At the Royal United Service Institution Mr. J. Furley read a paper on the Convention of Geneva and the Care of Sick and Wounded in War. Mr. Furley said the convention was drawn up in 1864, eight European States signed it within six months, and at the present time thirty-six governments were bound by its regulations, and thirty-seven Red Cross Societies have been formed, each with an independent national existence.

LONDON, May, 1896.

A JOKE ON TENNYSON.—The following not improbable story has found its way into the columns of the lay press: "Alfred Tennyson was once greatly humiliated by an eminent Scotch surgeon and professor in the Edinburgh University, who was entirely devoted to and wrapped up in his profession. Tennyson had occasion to go to him at one time to consult him in regard to some affection of the lungs. Years afterward he returned on the same errand. On being announced, he was annoyed to find that the professor had no recollection of his name or face. He mentioned the fact of his former visit, but still the professor seemed not to know who he was. But when the professor had put his ear to the poet's chest and listened to the sound that the old ailment had made chronic, he at once exclaimed: 'Ah, I know you now! I remember you by your lung!' And Tennyson was the poet-laureate."—*Medical News*.

Abstracts and Selections.

DIAGNOSIS OF GASTRIC DISEASES.—In comparison with diseases of other organs the methods of diagnosis of diseases of the stomach have received but comparatively little notice in our current literature. An article by Dr. Boardman Reed in the Medical News of New York of January 18th is of especial interest in that it defines minutely the methods of diagnosing certain conditions of the stomach frequently met with but seldom recognized in ordinary medical practice. The paper is entitled "The Diagnosis of Changes in the Size, Position, and Motility of the Stomach in Cases where Intra-gastric Instruments can not be Used." It deals almost entirely with two methods of physical examination—*clapotement* and percussion. Dr. Reed is of opinion that it is best to examine the patient at a time when the stomach should be entirely empty—that is, the morning, fasting, or six hours at least after the last meal. If after that period the splash by *clapotement* can still be obtained we can infer deficient motility. Noting at the same time the lowest point where the splash can be distinctly heard, we may infer as a rule that the lower boundary extends to about that level. The abdomen should then be percussed in various positions to verify the result of the *clapotement* and to map out the boundaries. The patient then drinks from one eighth to one fourth of a liter of water, and another attempt is made to obtain the splash; if it is obtained after the smaller amount it raises a question as to the motility. Percussion of the boundaries of the stomach with the viscus partially full and the patient standing is then performed. The water should be given gradually, when if the stomach is atonic the area of dullness usually extends downward with each successive glass, but if its muscle is healthy and strong the dullness extends upward only or mainly. Dr. Reed differentiates nine conditions which may be recognized by these methods: (1) Normal stomach. If empty no splash is heard until the viscus is partially full, and then it may still be absent or only very feebly heard. Percussion will demonstrate the normal boundaries. (2) Atonic stomach. The splash may be heard from four to six hours after a full meal, but it is easily obtained after the drinking of a small quantity of water. Percussion will show delayed emptying of the organ. (3) Stomach enlarged, but motor power strong (megalogastria of Ewald). The lower border of the stomach is at the level of the umbilicus or lower. No splash is obtainable six hours after food. (4) Stomach enlarged and motility weak (dilatation or gastrectasia). The splash is obtainable six hours after a meal. Percussion shows enlargement of the organ and delay in emptying itself. (5) Gastropptosis. The stomach is wholly displaced downward, but otherwise normal. The splash is usually more easily obtainable than normal.

Percussion shows descent of both upper and lower boundaries. (6) Stomach enlarged and displaced downward as a whole, but not dilated. The same as in No. 5 except that on percussion the upper boundary is not so much displaced. (7) Stomach wholly displaced downward and dilated. The same as in No. 6, but the splash is obtainable too long after a meal. (8) Pyloric end of the stomach displaced downward to the left (pyloroptosis), but without dilatation. The splash is obtained far below the level of the normal lower border. Percussion reveals the pyloric end low in the abdominal cavity. (9) Pyloroptosis with dilatation. The same as in No. 8, but the splash is more pronounced and is found too long after food or drink. Percussion shows also a widening of the pyloric end of the stomach.—*The Lancet*.

LAPAROTOMY IN TUBERCULOUS PERITONITIS.—Gatti (*Gazz. degli Ospedali*) has experimented on guinea-pigs, dogs, and rabbits. In these animals the parts first and most attacked are the great omentum, the gastro-hepatic and gastro-splenic ligaments. In guinea-pigs the caseous form predominates, in dogs the fibrous, in rabbits the mixed. In guinea-pigs a thickening of the great omentum below the stomach is very soon observed; in dogs and rabbits there is (1) a stage of miliary tubercle; (2) confluence of the tubercles with great increase in thickness of the omentum; (3) the stage in which the omentum becomes tumefied. Laparotomy has no effect when the tubercle is not yet developed or in an early stage. In the first three to five days after laparotomy the tubercle does not present any macroscopic modification, but a small quantity of reddish serous fluid is found in the peritoneal cavity. From seven days to almost a month after the operation the tubercles are almost found to be increased; only after about a month do they begin to show a diminution. In many animals this decrease was only macroscopic; in others microscopic as well. Histologically from eleven to twelve days after the laparotomy there is no increase of the lymphoid cells; no phagocytosis in guinea-pigs; in dogs the phagocytosis is about the same as was found at the time of the operation, but there is no karyokinesis. There is no development of fibroplastic cells as described by various authors. The result of the author's observations is that healing takes place by degeneration of the epithelioid cells, independently of phagocytosis, without the formation of new connective tissue, contrary to what had been previously pointed out by many authors. As to the factors which stimulate this process, the author directs attention to the serous fluid found one, three, and five days after the operation, which seems to saturate the tuberculous mass, exerting a bactericidal and attenuating action on the bacilli.

N. K. Vassilevsky (*Arch. de l'Inst. Imper. de Med. Expér. St. Petersburg*, 1895, Tome iv, No. 3, p. 263,) has also experimented on this subject. Several rabbits were injected with a pure culture of Koch's bacillus; an artificial tuberculous peritonitis having thus been produced, laparotomy was after a time performed. The author's conclusions are: (1) The operation alters the histological character of the tuberculous growth in that an increase of the

epithelioid cells takes place in them, and diminishes at the same time in the tuberculous granulations the number of the white elements. (2) The laparotomy checks the general dissemination of the tuberculous process. (3) The operation reduces the number of the Koch's bacilli in the tuberculous granulations, and promotes the resorption of the products of the decomposition which took place in the tuberculous granular growth previous to the operation.—*British Medical Journal*.

CERTAIN SUBJECTIVE VISUAL SENSATIONS.—Lehender (*Kl. Mon. f. Aug.*) draws the following conclusions from his series of five articles:

1. The blood current in one's own eye is easily perceptible without the aid of any artificial means, even the pressure of the finger on the eyeball.

2. The blood current visible in one's eye is not in the retinal capillaries, but in those of the choroid.

3. The current is not regular but varies from a steady rapid current through all the stages to positive stasis.

4. No movement synchronous with cardiac action or respiration has been observed.

5. The vascular walls are never visible during the occurrence of this phenomenon.

6. The bright spots, which by close attention can be seen both day and night, are to be regarded as the expression of Pflüger's so-called "explosion of the cells."

7. Objective light acts primarily and photochemically on the pigment, and secondarily on the rods and cones, and similar changes are induced by the blood current.

8. The pigment granules and their movements are equally visible in one's eye under favorable conditions.

9. From the movement and changeable arrangement of the pigment granules there sometimes result remarkably regular polygonal figures. These figures, which are images of retroretinal things, probably resemble the vision of animals provided with faceted eyes.—*New York Medical Journal*.

PROLAPSE OF URETHRA IN FEMALE CHILDREN.—Broca (*Annales de Gynec. et a'Obstet.*) examined in February, 1896, a girl, aged six, who had alarmed her mother through the appearance of blood at the vulva for three days. It was naturally taken for menstruation. The child had been kept in bed for a fortnight on account of severe bronchitis, with violent coughing. On the day that she got up for the first time the bleeding began. Broca examined the parts, and noted a little red protuberance at the meatus, caused by prolapse of the urethral mucous membrane. He directed that the everted mucosa should be touched with a two-per-cent solution of nitrate of silver. The bleeding ceased permanently after the first application. At the end of three days the cure was complete. Broca lays stress on this case, as it shows the extreme importance of early recognition and early

treatment of this affection. In another case the mother suspected rape. The court ordered a medical examination, and the truth was at once made evident. Thus the meatus must be carefully explored in all cases where blood is found near a child's genitals. Neglect of treatment leads to complete prolapse, not curable by caustics. Then ligature of the prolapse around a retained catheter, or excision by the cautery are objectionable. Circular excision is indicated. No more mucous membrane should be drawn down, else a thrombus may develop in the submucous tissue, and stricture ultimately follow. Again, the upper part of the mucosa should be fixed by passing the sutures through it before the excision, else it will slip up very high and give great trouble. The sutures must be very carefully tied at the end of the operation.—*British Medical Journal*.

THE DURATION OF LIFE AMONG PHYSICIANS.—The *Progrès médical* for April 18th says that Dr. Salzmann, of Essling, Germany, has made researches in regard to this subject among the archives of the German provinces, and obtained the following proportions: In the sixteenth century the mean duration of life was thirty-six years and five months; in the seventeenth century, forty-five years and eight months; in the eighteenth century, forty-nine years and eight months; and in the present century, fifty-six years and seven months. These results, says the *Progrès médical*, are encouraging, and show that the favorable increase in the duration of life is due to the progress of preventive medicine, and especially to the great diminution of typhoid fever and smallpox.—*New York Medical Journal*.

HYPERMETROPIA OF HIGH DEGREE.—Zimmermann (Ann. of Ophth. and Otol.,) draws the following conclusions from his observations: 1. Hypermetropia of high degree is always congenital and without tendency to increase. In children a decrease may be expected. 2. It presents no characteristic lesion of the choroid, retina, or media. 3. Astigmatism is present in about fifty per cent of the cases. 4. The severity of the asthenopia bears no close relation to the degree of the defect. 5. The principal complication is convergent squint. 6. The influence of heredity is not clearly defined. 7. Early full correction is indicated in all cases, especially when squint is present.—*Ibid*.

ULCERATIVE CHANCRIFORM TONSILLITIS.—A crateriform ulcer on one tonsil, with a sloughing base and somewhat indurated edges, has been observed in several cases by Mendel. (*Arch. Internat. de Laryngol.*, November and December 1895.) It was accompanied by considerable dysphagia and by slight swelling of the corresponding glands. It gets well in a few days under the action of iodized applications and boric gargles. This affection is apt to be mistaken for primary syphilis, but it is to be distinguished from it by its rapid evolution and the slighness of the glandular enlargement.—*British Medical Journal*.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÆ*"

Vol. 21.

SATURDAY, MAY 30, 1896.

No. 11.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of **THE AMERICAN PRACTITIONER AND NEWS**, Louisville, Ky.

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JOHN P. MORTON & COMPANY, Louisville, Ky.

NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS.

At the sixth conference of this body, held at Atlanta, Ga., May 4, 1896, the president, Dr. William Warren Potter, of Buffalo, chose the "Relations of Medical Examining Boards to the State, to the Schools, and to Each Other," as the title of his annual address.

He said there were three conditions in medical educational reform on which all progressive physicians could agree—namely, first, there must be a better standard of preliminaries for entrance to the study of medicine; second, that four years is little time enough for medical collegiate training; and, third, that separate examination by a State board of examiners, none of whom is a teacher in a medical college, is a prerequisite for license to practice medicine. It is understood that such examination can be accorded only to a candidate presenting a diploma from a legally registered school.

He further stated that a high school course ought to represent a minimum of academic acquirements, and that an entrance examination should be provided by the State for those not presenting a high school diploma or its equivalent.

He did not favor a National Examining Board, as has been proposed, but instead thought all the States should be encouraged to establish a common minimum level of requirements, below which a physician

should not be permitted to practice ; then a State license would possess equal value in all the States.

In regard to reciprocity of licensure, Dr. Potter thought it pertinent for those States having equal standards in all respects to agree to this exchange of interstate courtesy by official indorsement of licenses, but that other questions were of greater moment just now than reciprocity. Until all standards were equalized, and the lowest carried up to the level of the highest, reciprocity would be manifestly unfair.

He urged that the States employ in their medical public offices none but licensed physicians. This, he affirmed, would tend to stimulate a pride in the State license, and strengthen the hands of the boards.

He denied that there was antagonism between the schools and the boards, as had been asserted. He said that both were working on parallel lines to accomplish the same purpose ; that there could not possibly be any conflict between them, and that they were not enemies, but friends.

The medical journals of standing, from one end of the country to the other, he affirmed, were rendering great aid to the cause of reform in medical education, and the times were propitious.

He concluded by urging united effort by the friends of medical education, saying that " the reproach cast upon us through a refusal to recognize our diplomas in Europe can not be overcome until we rise in our might and wage a relentless war against ignorance that shall not cease until an American State license is recognized as a passport to good professional standing in every civilized country in the world."

Certainly the question could not be stated more pointedly, with more fairness, more conservatism, or with greater justice to all concerned.

It is not true that the medical schools are trying to dodge the issue, as has recently been asserted in high circles. On the contrary, there is not a medical school of any strength or standing in the land that is not doing all that lies legitimately in its power to elevate the standard of medical education.

Reforms, however, must not be spasmodic if they are to be permanent, and he who does not recognize the transitional state that our schools are now passing through as necessary to the attainment of the altitude prescribed for 1899, is a superficial fault-finder and a dangerous counselor.

If we had more reformers with Dr. Potter's clearness of vision and conservatism of temper, the question of medical education in America would soon cease to be a vexed one.

DR. O. D. TODD.

The unexpected death of this well-beloved and well-known practitioner of Henry County was a shock to a multitude of friends. Perhaps no physician in the State ever enjoyed a wider popularity among the profession and laity than Orrin D. Todd.

Brave, manly, generous, kind, charitable, skillful, original, his character was unique. We "shall not look upon his like again."

A fitting memoir of the life and character of Dr. Todd will be presented to the State Society by that ready writer and skillful biographer, Dr. Lyman Beecher Todd, of Lexington. This we expect to lay before our readers.

At a recent meeting of the Shelby County Medical Society the following tribute was paid to the memory of Dr. Todd:

WHEREAS, The all-wise Creator has seen fit to remove from our midst our beloved brother, Dr. Orrin D. Todd; therefore be it

Resolved, That the medical profession has lost an eminent and worthy physician, the community in which he lived a gentleman of excellent attainments and attractive social qualities.

Resolved, That the Shelby County Medical Society as a body tender his relatives its deepest sympathy in this hour of their gloom.

Resolved, That these resolutions be spread on the minutes of this body, and copies sent to the local papers and medical journals.

DRS. JOHN G. BIRCHETT,
T. N. WILLIS,
T. E. BLAND,
Committee.

Notes and Queries.

KEATS AND THE MEDICAL PROFESSION.—*Sir*: The following extract from an essay read before our Historical Club on the occasion of the centenary of Keats' birth, may interest your readers. The excerpts are from Forman's new edition of the Letters. I am, etc., WILLIAM OSLER.

BALTIMORE, Dec. 24, 1895.

Very few indications of his professional training are to be found in Keats' letters, fewer still in his poems. Referring to his studies he says in one of the early poems (the epistle to George Felton Mathew), "Far different cares beckon me sternly from soft Lydian airs." During the four years from 1817 to 1820 he made fitful efforts to bestir himself into action, and on several occasions his thoughts turned toward his calling. In a letter written to his brother in February, 1819, he says, "I have been at different times turning it in my head whether I should go to Edinburgh and study for a physician; I am afraid I should not take kindly to it; I am sure I could not take fees—and yet I should like to do so; it is not worse than writing poems and hanging them up to be fly-blown on the review shambles." In 1818 he wrote to his friend Reynolds, "Were I to study Physic, or rather Medicine, again, I feel it would not make the least difference in my Poetry; when the mind is in its infancy a Bias is in reality a Bias, but when we acquire more strength, a Bias becomes no Bias," adding that he is glad he had not given away his medical books, "which I shall again look over, to keep alive the little I know thitherwards." In May, 1820, when convalescent from the first attack of hemoptysis, he wrote to Dilke, "I have my choice of three things—or at least two—South America or surgeon to an Indiaman, which last will be my fate." A year before, in a letter to Mrs. Jeffreys, he spoke of voyaging to and from India for a few years; but in June, 1819, he tells his sister that he has given up the idea of an Indiaman, and that he was "preparing to inquire for a situation with an apothecary." Allusions to or analogies drawn from medical subjects are rare in his letters. In one place, writing from Devonshire, he says, "When I think of Wordsworth's sonnet, *Vanguard of Liberty*, etc., the degraded race about me are *pulvis ipecac. simplex*—a strong dose."

He played a medical prank on his friend Brown, who had let his house to a man named Nathan Benjamin. The water which furnished the house was in a tank lined with lime, which impregnated the water unpleasantly. Keats wrote the following short note to Brown:

"SIR—By drinking your damn'd tank water I have got the gravel. What reparation can you make to me and my family? NATHAN BENJAMIN."

Brown accordingly surprised his tenant with the following answer:

"SIR—I can not offer you any remuneration until your gravel shall have formed itself into a stone—when I will cut you with pleasure. C. BROWN."

The poet Keats is said, by our Dr. William Osler (*British Medical Journal*), to have told the following story:

In a letter to James Rice he tells one of the best "maternal impression" stories extant:

"Would you like a true story? There was a man and his wife who, having to go a long journey on foot, in the course of their travels came to a river which rolled knee

deep over the pebbles. In these cases the man generally pulls off his shoes and stockings and carries the woman over on his back. This man did so; and his wife being pregnant and troubled, as in such cases is very common, with strange longings, took the strangest that ever was heard of. Seeing her husband's foot, a handsome one enough, looked very clean and tempting in the clear water, on their arrival at the other bank she earnestly demanded a bit of it. He being an affectionate fellow, and fearing for the comeliness of his child, gave her a bit, which he cut off with his clasp knife. Not satisfied she asked for another morsel. Supposing there might be twins he gave her a slice more. Not yet contented she craved another piece. 'You wretch,' cries the man, would you wish me to kill myself? Take that!' Upon which he stabbed her with the knife, cut her open, and found three children in her belly, two of them very comfortable with their mouths shut, the third with its eyes and mouth stark staring wide open. 'Who would have thought it?' cried the widower, and pursued his journey."

THE PREVENTION OF TUBERCULOSIS.—The eminently wise and judicial attitude assumed by Dr. James B. Russell, the medical officer of health of Glasgow, in his just-issued Report on the Prevention of Tuberculosis, referred to in our Glasgow correspondent's letter last week, makes us hope that this report will be available for general circulation. For it speaks the language of common sense on every page and defines with precision the limits within which it is legitimate or necessary for the public health to take action in regard to tuberculosis from the point of view of the sanitary authority. It is manifest that the opinions thus expressed by one who stands foremost among the medical administrators of the Public Health Act, and whose personal work in the sanitary improvement of Glasgow has been attended with remarkable success, can not fail to carry great weight; while we are pleased to note that the views that Dr. Russell propounds are in harmony with those often expressed in these columns upon the question of the infectivity of tuberculosis. Dr. Russell draws a marked line of distinction between this widespread scourge and that of infectious diseases in the popular sense. It is true, he says, that in all cases tuberculosis is gained by infection, but it is not all that can cause infection; and the application to such a disease of all the machinery of sanitary administration—as notification, isolation, disinfection, and so on—is as unnecessary as it would be vexatious and cruel. For, as he points out in speaking of phthisis—the chief form of tuberculous disease from which aerial infection can arise—the measures of prophylaxis may almost be summed up in individual care to prevent the dissemination of dried sputum in dust, and in the general adoption of improved dwellings to avoid overcrowding and to insure ample sunlight and free movement of air. The risk of direct communication of the disease from the sick to the healthy is as nothing compared with the overlading of the atmosphere with infected dust, which may be introduced with food as well as inhaled. He points out, too, that the factor of individual vulnerability is of great importance—the removal of the natural barriers to entrance of bacilli by catarrh and ulceration, and the lowered vitality of blood and tissue which enables the invading microbe to prevail in the

struggle for existence. As regards the liability to infection from the consumption of flesh and milk from diseased animals, Dr. Russell, with the practical sagacity so characteristic of all his writings, urges the adoption of measures to enable the authorities to detect the presence of tuberculous disease in the living animal, and wisely suggests that more attention should be paid to the prevention of the disease among cattle by improving the hygienic condition of their byres. It is, indeed, not surprising that bovine tuberculosis should be so common when the animals live in conditions that are so favorable to the development of the bacilli. Of course the general rule that meat should be thoroughly cooked and milk boiled before being used for human consumption are precautions which partake of the same essential character as that of preventing the drying of expectorated matters and the dissemination of tuberculous dust. Dr. Russell's report is scientific and practical; it has, moreover, a literary charm which renders it very attractive. We can only reiterate the hope that it will be widely disseminated.—*The Lancet*.

DR. CHARLES FAUVEL, of Paris, who died recently, was one of the pioneers of laryngology in France. He was born in 1830 at Amiens, where his father was one of the leading practitioners, and studied medicine first in his native town and afterward in Paris, where he was interne at the Lariboisière and Charité Hospitals, and had Cruveilhier, Velpeau, Tardieu, and Nèlaton among his chiefs. He took his degree in 1861, the title of his thesis being "Du Laryngoscope au Point de Vue Pratique." He was of a highly sociable disposition, and acquired a large circle of acquaintances among singers, actors, artists, and journalists. Taking up diseases of the throat as a specialty at a time when the field was unoccupied, he quickly won his way in practice. If success be measured by the number of patients, Fauvel was one of the most successful practitioners in Paris; he himself is the authority for the statement that between 1871 and 1890 he saw 19,000 patients. Among those who sought counsel of him were the late Emperor of Brazil, the Ex-Queen Isabella of Spain, and all the stars of the opera and the stage. He was the author of a treatise on the diseases of the larynx, and of many contributions to the literature of his specialty. He was a skillful laryngologist, but he was still more a man of the world. He was a thorough Parisian, with all the qualities and all the limitations connoted by that term.—*British Medical Journal*.

EUCAINE, a new artificial alkaloid, said to be the methylester of a benzoylated oxypiperidinecarbonic acid, is said by H. Kiesel, a Berlin dentist

operation, the heart beats became normal and regular very soon after the injection.

2. The anesthesia is more extensive in area and lasts longer than that of cocaine. In some of my experiments the analgesia extended even to the muscles. In one case, where an injection was given over the first incisor, there occurred paralysis of the ala nasi and anesthesia of the nasal mucous membrane on the right side. The patient declared that her nose felt as if it was stopped up, but the sense of smell was not interfered with.

3. As much as thirty grains of eucaine may be injected without trouble; while an equally safe dose of cocaine is only one sixth of a grain. Thus, of a solution of 1 to 6½, about fifteen per cent., twelve syringefuls would constitute a maximum dose. Half that quantity would, however, under favorable circumstances be sufficient to render the extraction of all the teeth painless.

4. Solutions of 1 to 6½ in sterilized water are permanent at the ordinary temperature of the room. They remain clear without the addition of carbolic or salicylic acid, and do not become flocculent as cocaine does.

5. Finally, I am informed that it is intended to put eucaine on the market at a price considerable lower than that of cocaine.—*New York Medical Journal*.

THE ALLEGED ACTION OF THE OBLIQUE MUSCLES IN OBLIQUE ASTIGMATISM.—Hotz (Ann. of Ophth. and Otol.,) discusses Savage's theory in the following manner: Why should in oblique astigmatism a horizontal line not form a horizontal image on the retina? The refraction of the eye affects only the sharpness of the retinal image, but not its location. The location on the retina of the image of a luminous point is determined by what Helmholtz called the direction ray, which forms a straight line drawn from the object point through the nodal point of the eye to the retina; where this direction ray touches the retina, there the image of its object point is formed. If the object looked at is a horizontal line, the direction rays connecting all its luminous points with the nodal point pass through the horizontal meridian of the cornea, and, as this meridian has a regular curvature in oblique astigmatism, these rays proceed undeflected in their horizontal plane through the nodal point to the retina, and form upon the latter a horizontal line.

It is therefore evident that neither experiments, nor clinical observations, nor the laws of physiological optics sustain the doctrine of the obliquity of the retinal images and the necessity of any action of the oblique muscles in oblique astigmatism. The theory rests on false premises and is wholly untenable.—*Ibid*.

TREATMENT OF CRURAL HERNIA BY AN INGUINAL OPERATION.—Tuffier (*Rev. de Chir.*) describes an operation for the radical cure of crural hernia, consisting in an incision of the anterior wall of the inguinal canal,

and in exposure through this wound of the crural sac. This operation is performed in six stages: opening of the inguinal canal; exposure of the superior orifice of the crural canal and isolation of the neck of the crural sac; extrusion of the crural hernia into the inguinal wound; opening of the crural sac, and removal of the same together with any omentum it may contain; closure of the crural ring by stitching Poupart's ligament to the pectineal fascia; closure of the inguinal wound by sutures. The author acknowledges that this method is attended with disadvantages, especially that of opening the inguinal canal. The dangers, both immediate and remote, of this step have, however, in his opinion been much exaggerated, as modern methods of aseptic suturing guarantee the surgeons against the risks of eventration, and the same objection would apply to the methods now generally practiced for radical cure of inguinal hernia. In cases of very large crural hernia much difficulty may be experienced in separating the crural sac so as to bring it freely into the wound. The inguinal method, it is held, is formally indicated in cases of associated inguinal and crural hernias. Its advantages are these: It affords a large operative field in which the surgeon may readily observe the exact condition of the herniated organs; it facilitates free resection of omentum, a very favorable condition, the author believes, of radical cure; it permits a section of the peritoneum well above the crural ring, and thus favors the suppression of the infundibulum which constantly exists in cases of crural hernia.—*British Medical Journal*.

LOSS OF WEIGHT IN GRAVES' DISEASE.—Huchard (*Journ. de Méd.*) draws attention to an interesting symptom in Graves' disease—rapid loss of weight occurring intermittently. Among the many symptoms of this disease some are much more uncommon than others, as the one under consideration. The case was that of a man aged twenty-five with well-marked Graves' disease. Without apparent cause he would, in the course of a few weeks, lose eight or nine pounds in weight without any other alteration in his general condition. This would then cease, and he would gradually regain his previous state. The writer looks upon it as one of diagnostic importance in many cases of exophthalmic goitre in which some of the cardinal symptoms are wanting, and it thus resembles Buzzard and Charcot's sign—sudden giving way of the lower limbs—in its inconstant occurrence. The explanation is, according to Huchard, hyperthyroidization. This is supported by some recent experiments carried out on animals by Ballet and Henriquel, who were able to produce marked loss of weight in dogs by injection of thyroid extract. This is, moreover, what one observes in cases of myxedema and obesity when so treated. The writer also believes in intermittent exaggeration of the thyroid action in Graves' disease, thus accounting for the intermittence of this symptom, as well as of diarrhea, cough, and tachycardia, etc., so frequently noted, all of which point to the inadvisability of giving thyroid extract in this disease.—*Ibid*.

A SIXTEENTH-CENTURY PLAN OF TREATING PROLAPSE OF THE UTERUS.—In the *Indépendance médicale* for April 22d we find an account by M. Fiessinger of how Amatus Lusitanus, about the year 1550, treated a case of falling of the womb. While lifting a heavy weight a young woman had felt pain in the loins and in the lower belly, and uterine prolapse was diagnosed. For Amatus to correct the displacement himself would have been indelicate, so a midwife was ordered to do it. When she had accomplished her part, a simple plan was resorted to for maintaining the organ in place. As everybody knew, the uterus was pleased with sweet odors; so the patient was directed to breathe the emanations of musk and fragrant herbs, and the womb would surely mount in the direction of her nostrils. But this was not all. The repugnance of the organ to unpleasant odors was also well known; therefore the vulva was exposed to the smell of galbanum and the fumes of burned feathers. Thus lifted from above and pushed up from below the womb could not fail to be kept in place.—*New York Medical Journal*.

DEATH AFTER THE INJECTION OF ANTITOXIN.—The following case, which is reported in the *New York Medical News* of April 11th, appears to be one of the same kind as the tragic occurrence which recently happened at Berlin. At Wheelersburg, Oregon, on March 22d, a practitioner who has had considerable experience in the use of serum, injected the usual prophylactic dose over the scapula of a boy aged five years while asleep. An hour before the injection the child was known to be in perfect health. In less than five minutes afterward the doctor was hastily summoned from an adjoining room to find the boy dead. No further details are given.

THE PREVENTIVE INOCULATION OF DOGS.—The researches undertaken by M. Pourtalé in collaboration with Professor Jolyet regarding the preventive inoculation of dogs against hydrophobia do not appear to have excited much attention, although the subject is unquestionably one of considerable importance. It is certainly better to prevent an evil than to cure one, and if dogs can be rendered refractory to hydrophobia in the manner advocated by these investigators it would seem as though we were arriving within measurable distance of the annihilation of one of the most terrible of all diseases.—*Lancet*.

RECENT investigations, quoted in the current number of *Science*, establish the fact that the essential poison of *rhus toxicodendron* can be nothing but an oil. Hence, water will not remove the poison from the surface, but alcohol will, if applied freely.

THE Royal College of Surgeons, England, has awarded the Jackson prize to Dr. A. A. Kanthack for an essay upon tetanus, and the Walker prize to Dr. H. J. Stiles, for the best work on cancer.

Special Notices.

CONTINUED compliment is paid M. Mariani for the maintained high standard and excellence of his preparations, by the numerous honorable mentions and indorsements by the members of the medical profession and those who had occasion to use his Coca preparations during the past thirty-five years.

Among the recent awards we note, Gold Medal and Silver Medal from the Académie Nationale de France; Gold Medal and a Grand Diploma of Honor from the Wine Exhibit of Bordeaux, France; Gold Medal and a Diploma of Honor at the Hygienic Exhibit at Amsterdam, Holland, and Mariani was awarded the Gold Medal and a Diploma at Leamington, England, the jury surnaming "Vin Mariani" "Wine for Athletes."

Professional bicyclists and athletes, after careful trials of numerous tonic preparations, invariably give the preference to "Vin Mariani." Messrs. Dubois, Lucas, Vigneaux, Echalié, André Henry, Imans, Buffel, and many others, have attested to the vast superiority of "Vin Mariani" over all other tonics.

In the recent long-distance bicycle races in France, England, and Bruxelles the winners used "Vin Mariani," as reported in the daily press.

"BRUXELLES, August 28, 1895.

"I, the undersigned, André Henry, winner of the bicycle race, August 26th, Paris to Dinant, without dismounting from the wheel during thirteen hours, declare having partaken of nothing but Vin Mariani to sustain my force.

"In addition will state that, after the race, I felt absolutely no fatigue nor any of the usually extreme lassitude such as I had felt after the Paris-Brussels and other races, when I had not used Vin Mariani. For my coming Belgium races I certainly will use Mariani's marvelous tonic.
(Signed) ANDRÉ HENRY."

DYSMENORRHEA.—In the March number of the *Alabama Medical and Surgical Age* is a very interesting article on Dysmenorrhœa by G. C. Chapman, M. D., of Birmingham, Ala., which we hope to soon reproduce in our journal.

Speaking of various methods of treatment the doctor says: "But the remedy that has proven the greatest boon to my patients has been Dioviurnia given in table-spoonful doses four times daily, beginning four or five days preceding the expected attack, and after the flow is established every two or three hours."—*California Medical Journal*, May, 1896.

LABOR SAVING: The American Medical Publishers' Association is prepared to furnish carefully revised lists, set by the Mergenthaler Linotype Machine, as follows:

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JOHN A. LEWIS, M. D.

THE AMERICAN PRACTITIONER AND NEWS

"*NEC TENUI PENNĀ.*"

VOL. XXI.

LOUISVILLE, KY., JUNE 13, 1896.

NO. 12.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—*RUSKIN.*

Original Articles.

KENTUCKY STATE SOCIETY: PRESIDENT'S ADDRESS.*

BY JOHN A. LEWIS, A. M., M. D.

Mr. President, Gentlemen of the Kentucky State Medical Society, Ladies and Gentlemen, whatever else may be rightfully chargeable to my account in life, I trust that no man shall ever be able to say truthfully of me that I was "weighed in the balance and found wanting" in gratitude. Those of you who were present one year ago at Harrodsburg, when I was inducted into the office of President of the Kentucky State Medical Society, will remember that I expressed to you then, as best I could, in sincere if not in forcible words, my grateful appreciation of the distinguished honor; and I might have been content to have rested the matter there, but lest some of these, my fellows, who are here to-night, were not present on that occasion, at the risk of stale repetition I must be allowed again to thank you, gentlemen, for the high honor conferred, and to assure you of my deep and abiding gratitude for your partiality.

And while upon this subject allow me to say, that if untiring energy and constant devotion to your interests in the hands of one so unworthy can avail any thing, then I feel that I hazard nothing in saying that, on the day following the morrow, I shall have the proud satisfaction of handing to the standard bearer of your selection your banner as untarnished as when I received it one year ago.

*Annual Address before the Kentucky State Medical Society by the President, John A. Lewis, A. M., M. D., of Georgetown, Ky., delivered at Lebanon, Ky., June 10, 1896.

And now it becomes my pleasing duty, in my own behalf and in behalf of the Kentucky State Medical Society, to extend a hearty welcome to the "fair women and brave men" of this community, who greet us with their presence to-night. I say "brave" advisedly, for in my estimation any company of ladies and gentlemen who can sit patiently for one hour with these doctors, while one of their number deliberately unrolls before them Ezekiel's panorama of the dry bones, assuredly deserves to be named among the *brave*. And while I can but feel a little sorry for you upon this particularly dry occasion, yet I trust that these annual convocations may in the end prove valuable. We shall become better acquainted, you will learn more of our objects and aims, and I hope you may come to understand that we are not mere onlookers, but a body of busy workers amid the surging events of our times.

And now, having as I trust successfully disposed of the pleasantries of the evening, I approach (not without some misgivings I assure you) the weightier matter, that of providing some mental "menu" for this occasion, which may prove palatable alike to doctor and layman composing this intelligent audience. If any of you imagine that I have an easy task amid tastes so diverse, I could almost wish the subject confronted you as it confronts me. To my mind it assumes serious proportions, and without some clever catering upon my part I fear somebody may go away hungry.

However, I sincerely hope that from the scant bill of fare spread before you each will find something that will at least sustain for the hour if not just as pleasant as could be desired, and that the coming morrow may bring no serious regrets for either host or guests.

While, in the midst of no little perplexity, racking my brain, searching things in the heavens and things in the earth and things in the great deep, for some subject suitable for this occasion, by one of those fortuitous happenings, which sometimes befall one in distress, I stumbled upon that happy delineation of Scotch character, entitled "Beside the Bonny Brier Bush," by Ian Maclaren, and as I read in the "Doctor of the Old School" the unique description of the sincere and simple life of those rugged Highlanders and how the honest folk of "Drumtochter

explanations at the "beerial." Then was suggested to my mind the subject which I propose to present in your hearing this evening, "The Prolongation of Human Life," a subject worthy of any speaker or of any audience.

Now I trust that none of my hearers, upon the bare announcement of my subject, will leap to the conclusion that I am about to advocate some utopian scheme for the lengthening of human life, or that I am in any way in sympathy with the Brown-Séquard idea which had for its end the discovery of some rejuvenating drug, or that I am about to organize anew Ponce de Leon's old search for the elixir of life. Not at all. I feel that I have something more substantial, something more real in view.

But it has occurred to me, as no doubt it has to you and to every intelligent man and woman, that human life, fraught as it is with grave responsibilities and immense possibilities, is entirely too short.

To me it has always seemed inexpressibly sad that after a human being had been carefully reared and trained by loving hands at great outlay of treasure and labor, then having passed through the school of experience, coming out fully equipped for the grave responsibilities of life, having just arrived at that point in his existence when he might prove a real blessing to mankind, his time is up, the gavel falls, and his voice is forever hushed in the corridors of time.

This picture of blighted hopes is one so constantly presented to our view that we are ready to exclaim with Robert Burns, "Surely man was made to mourn."

Now the object which I have in view in this address is to direct attention to the subject under consideration, to stimulate patient and systematic research into the causes which have led to the shortening of human life, if perchance some method or plan of life may be suggested or discovered (if you please), by rigidly adhering to which the general average of life (now about thirty-three years) may be extended to the Psalmist's farthest limit of three score years and ten; while the now farthest limit may be pushed to five score years, and even beyond.

I know that many of you will smile at the proposition. Well, "he laughs best who laughs last." Wait a thousand years and see if my word are not words of wisdom.

For my part I see no real reason why diligent research in this direction ought not to be richly rewarded. Without question, if there is a wrong mode of living, by which man may shorten his life, then assur-

edly the converse of this proposition must be equally true, that there is a right mode of living, which if rigidly adhered to will result in the lengthening of life.

Men of brain and thought are to-day wasting time and energy upon problems much more intricate and not half so important. In my estimation the problem of longevity is not half so difficult of solution as the problem of the long-distance telephone, when viewed from its incipency in the lodestone to its last marvelous result, that of conversing from Chicago to New York, as if man spoke face to face with man.

This subject most naturally presents itself for discussion under three heads:

1. Is the lengthening of human life desirable?
2. Why is life so short?
3. Is it possible, by any human agencies, to lengthen life? If so, what are they, and how are they to be applied?

The question, whether the lengthening of human life is desirable, is one of those questions which scarcely admits of debate.

Man, in all ages, has spoken in no uncertain voice upon this subject in the eagerness with which he has laid hold upon every scheme, however visionary, which has had for its end the addition of a single day to the span of life.

I am aware that there are a few men who do not want life prolonged; they are generally found among the disappointed classes—the muggumps in life—they go about humming, “I would not live always,” but nobody believes them.

I know, furthermore, that there is a sentiment abroad that there are already too many people in the world, that they are now trampling upon one another's feet, and as the prolongation of human life would necessarily lead to an increase of population, my proposition is likely to evoke opposition in this direction.

Well, I have yet to find a single man who feels that he belongs to the overplus of the population—it is always his neighbor who could be spared! To these timid ones, these people who can scarcely get a full breath in a ten-acre lot with the bars up, by the way of reassuring them, let me say that Symzonia is yet an unexplored country, while the Dark Continent is still a “terra incognita.” Now, all will readily admit that

it is a matter of congratulation that the "sun" still "shines bright in the old Kentucky home" to the vast majority, and from these I am sure my proposition will receive cordial assent.

It does seem to me, if there is any thing in inhaling the pure air of earth; if any thing in enjoying the bright sunshine of heaven; if any thing in hand grasp to hand, or in heart beat to heart; if any thing in friend meeting friend; if any thing in our hopes and ambitions, in our triumphs, and even in our defeats; if any thing in life—then assuredly long life is greatly to be desired. But if we must seek for a reason, then perhaps the most potent one is to be found in the fact that the world to-day needs wisdom, just as the world has done in all ages. The world's every interest demands wise men at the helm. Wisdom is the child of age and experience. *Men* are born with brain; *no* man was ever born wise. Young men may be shrewd, bold, energetic, but rarely wise or prudent. The world has rarely looked upon the picture of a wise young man. The world's Nestors of to-day are men whose locks are white with the snows of many winters, whose shoulders are stooped from long bearing the burdens of life, and whose brows wear the furrows of deep and prolonged meditation.

Allow me to draw you a few pictures from real life, as they appear to-day, and you will the more readily comprehend why long life is so much to be desired.

What a blessing, not only to his own country but to the entire world, is that octogenarian, William E. Gladstone, the wisest, most venerated and honored man among the English speaking people. How the ear of the world is strained to catch his every utterance, whether it be upon the subject of home rule for Ireland or upon the Eastern question, involving the very existence of the Ottoman Empire—or as a polemic, he becomes the able defender of the Christian faith—or his estimate of some honored friend. When he speaks, the world hears and profits. Now imagine this magnificent specimen of the race, now in his eighty-seventh year, to be just in his prime, with the promise of a robust and vigorous old age reaching to one hundred years.

You can gather from this picture what I would dare hope for the entire human family. But alas! he has now outlived his day and generation; he is upon borrowed time, the end can not be long delayed.

Again, what a picture of the embodiment of wisdom and experience was presented in the life of the late Emperor William, of Germany, the trained soldier, the able diplomat, the wise ruler. It is hard to find a

more magnificent picture in all history than this old soldier king, at the ripe age of seventy-one, in the saddle, spurred and helmeted, vigorously leading in person the armies of combined Germany through the Franco-Prussian war, defeating the Emperor Napoleon and the French armies in every battle from Saarbruck to Sedan. By his wisdom and prowess in arms Germany was unified, and on French soil in the ancient palace of the Kings at Versailles, he was crowned Emperor of Germany—returning at the head of his victorious legions to the Fatherland, the most honored sovereign in all the earth. What a bulwark to his country was his wisdom and experience! How too short was his life for his country's good, although he lived to the ripe old age of ninety-one years. What a blessing to his country had he been spared even another decade! What a contrast in wisdom to the present young "Hotspur" who sits uneasily on the throne of his wise grandfather's building.

I must be allowed to give you one more picture, drawn from the other extreme, that of a young life, so promising, so capable, so useful, cut off ere his sun had hardly reached the meridian. There lies buried on the island of Samoa, thousands of miles from his native land, Robert Louis Stevenson, the most gifted and polished young writer in the field of fiction. Known, loved, admired, among the cultivated classes of the entire world, just as he had reached perfection in his art (that of pleasing with his pen), a goal toward which he had labored so long and so patiently, his young life went out. He had left his home in England and sought this far off country because he could not exist in his native land. To the Samoan Chief he said: "I have chosen this land to be my land, this people to be my people, to live and to die with." How pathetically he said "I do not ask for health, but I will go anywhere, live anywhere I can enjoy the ordinary existence of a human being." How he loved life! He was willing to make any sacrifice for bare existence. What a pity he could not have been spared, even to have lived out his three score years and ten, though a poor invalid. What a bright prospect was before him! How he would have delighted and blessed the race! And could he have lived to the good old age of one hundred years, what a store-house of wisdom and of pleasure he would have proven to the world!

What a mine of treasure was lost to the world when the great heart of Pasteur ceased to beat and his great brain ceased to think!

Who can tell how much the world has lost in the deaths of such

men as Oliver Wendell Holmes, Samuel D. Gross, Marion Sims, Alexander Stevens, Charles Spurgeon, John A. Broadus, Henry Grady, and a thousand like them!

And now what is true of these worldwide characters is equally true of every useful man and woman, of whatever calling in this universe, it matters not how humble the sphere which they may occupy.

This brings me to the discussion of my second proposition, "Why is life so short?"

I am not unaware of the fact that there are many people in the world who believe that man's present short limit of life (three score years and ten) comes by Divine appointment, and that the Psalmist's statement, that "the days of our years are three score years and ten," carries with it the sanctity of Divine command. And some may even go so far as to charge me with being unorthodox when I propose to alter by purely human agencies this limit of the Psalmist. But Moses, who was the author of this statement, only stated the fact in regard to the length of man's life as it then existed, or as he foresaw it would very soon be.

It is true that the Divine Creator, in the days of Noah, did say, "Man's days shall be one hundred and twenty years." Now, granting that from this statement it would be unscriptural to live more than one hundred and twenty years (which I do not admit), still what a vast difference between one hundred and twenty years and the present average of life!

Now the truth in regard to this matter seems to be this, that six thousand years ago, and perhaps more, man broke faith with his Creator and committed the blunder of the ages. With all the outlying centuries intervening, with our meager store of information, it is impossible for us to say in just what his great transgression consisted. But our progenitors were certainly very disobedient, refusing to be controlled by wise laws, probably both moral and physical, which a beneficent Creator had instituted for their guidance and well-being, and within the bounds of which laws it is tacitly implied that they and the succeeding generations would have known no death. If man's disobedience in that far-off day to every law of his well-being was as surely and speedily followed by decay and ruin as it is in our day, it would seem, that it would have required no Divine edict to have told him that the end was death.

What prescience does it require to-day to predict of the profligate an early grave? But while it is beyond all cavil that by man's disobe-

ence came death, yet it is equally beyond question that the present measure of man's days was not set by that edict. For the patriarchs who lived during the first two thousand years were just as much under the curse as we of this nineteenth century, and yet many of them lived to be nearly a thousand years old.

How has it come to pass then that the descendants of these long-lived patriarchs have so retrograded in the centuries until the average of human life is but thirty-three years, a pitiable span indeed! I see no escape from the conclusion that man, and man alone, is largely responsible for it—not our first parents, but the generations which have followed them. Each and every intelligent man, since the day of Adam, has played either an active or silent part in this matter. You and I and every other man has been to a more or less extent a party to the folly which has weakened our naturally robust bodies, rendering them an easy prey to disease and death! Man's short life is evidently an evolution from long centuries of utter disregard and flagrant violation of the plainest laws of health.

In this enlightened day, this golden age of hygiene, I will ask you if you are acquainted with one single law of health which is not continually and frequently broken by the great majority of mankind? We are gluttons and wine bibbers, tobacco smokers and chewers, breathers of impure air, drinkers of polluted water, and violators of the laws of health in a thousand ways. Man was fashioned in the image of his Maker, built by the Master Workman of this universe (originally, like the "One Horse Shay," built of selected material, and built to stay). Had it not been so, his body would long ago have succumbed to the thousand enervating influences to which it has been subjected, and man would have ceased to exist in the world. But physical man has made a grand fight for existence. It has required the blunders and the follies of ages to make its impress upon his sturdy form.

But I would not have you understand that the decadence of human life has ever been constant, and that there has been no time when man held his own, that there has been no halts, no rallying, no disputing

But I am sure you have already anticipated me in the question, What part has disease played in the process of shortening life, and who is responsible for this arch enemy of our existence?

I do not know that I can satisfactorily answer your inquiry, but I must emphatically enter my demurrer to that popular belief, that disease has been created by a beneficent Creator, and sent into the world, turned loose for the harassment of man, much in the same way that a bull-dog is set on a tramp.

If a lamb breaks away willfully and wanders off from the fold, it must not be surprised if it is set upon by the wolves. But it ought to be a matter of great surprise if the shepherd provided the wolves to kill and harass his own flock.

None can deny that very many of our commonest diseases man alone is responsible for by his careless disregard of the plainest laws of health, laws so plain that a "wayfaring man, though a fool, need not err therein."

But you may ask me whence sprang the specific contagious diseases, and who is responsible for their presence in the world. I answer that I believe that these diseases are the offspring or evolution (if you please) of highly unsanitary conditions, maintained with unvarying constancy through long periods of time, how long I do not know, nor just what the conditions were, but long enough to stamp them with an unchanging identity.

Cholera is a highly contagious disease, and is without doubt the offspring of the congregation of vast numbers of filthy human beings. Its habitat and brooding ground is in India, along the Ganges, where gather millions of filthy pilgrims journeying to the great Hindu feasts. And as an indication as to the part which wise sanitation may play in preventing this disease, I will mention that during the year 1895, when one million five hundred thousand of Hindus gathered at the great bathing festival at the junction of the Ganges and Jumna rivers, such were the precautions taken by the civil, medical, and military authorities, that only three deaths occurred from cholera, where thousands had occurred formerly at these festivals. The government of India is thoroughly aroused upon the subject of sanitation service for India, and ere many years we may expect cholera epidemics to be held under control. If what I have said is true, then the inference is almost indisputable that man is very largely responsible for the existence of disease in the world.

This brings me to another division of this subject, perhaps the most important which I shall discuss before you this evening.

How far is *heredity* responsible for the short life of man? This is a delicate subject to be discussed before a mixed audience, but in these days when knickerbockers and bloomers stalk abroad in daylight, no prudishness ought to prevent the open discussion of a subject so important to the welfare of humanity. But, as I was born in an age when a woman in bloomers and a mad dog would have created just the same sensation, and received just the same treatment, and when it was not considered unmanly for even a man to blush, I think I may be trusted to treat the subject delicately. I will suggest—you may do the thinking to-morrow. I will cut the fuse long, and fire it—the explosion will take place long after my voice shall have been hushed and this hall shall have been deserted.

Robert Ingersoll, with amazing effrontry and folly, has arraigned rather petulantly the Almighty for not making good health catching instead of disease. I answer, if this is not true, a truth closely akin to it and well-nigh as important to the human family is true, that is that robust health is transmissible from one generation to another. No one can deny that long life and good health are transmissible from father to son. We have examples of this before our eyes every day. Like father, like son. And why not? Disposition, face, feature, form, color of the hair, even the tint of the iris, are inherited. Why not health and vigor?

On the other hand, the heredity of tuberculosis, cancer, gout, rheumatism, heart disease, *et id omne genus*, are unquestioned—at least the hereditary tendency is unquestioned.

The life insurance companies base their acceptance or rejection of risks largely upon these facts. How surpassingly strange, with these stubborn truths staring us in the face, yet the human family pay little attention to the laws of heredity. "Tell it not in Gath, sound it not in Askelon." I can conceive of no sadder picture than a father, or mother, standing over the frail form of some loved child dying on the threshold of life from some inherited disease—the pale face and sunken eye turning imploringly for help to those most responsible for the deplorable condition. It would seem that one object lesson of this kind in a community ought to be sufficient to arrest thoughtful attention from every observer for an age. But not so. These occurrences are so frequent that man seems to have become calloused, and they are passed without notice.

A total disregard of the laws of heredity simply means the sowing broadcast of the seeds of disease and death. It betokens a recklessness that bodes no good; a sort of feeling that I do not care what happens, so it does not happen to me. It exhibits on the part of one generation a reckless disregard for the welfare of another. This is a much more serious matter than most of you imagine. It directly affects the destiny of the entire human family. A wise writer has lately said that "there is scarcely one of us that can present a clean bill of health, and this is largely due to hereditary influences." It requires no prophetic wisdom to predict man's utter blotting out and complete departure from the earth from hereditary influences alone, in the centuries to come, unless he materially mends his ways.

Now this evil tendency could be prevented if men were prudent, wise, thoughtful. It could be prevented, it ought to be prevented. The trouble is beyond the jurisdiction of State or law, but not beyond the power of public opinion. Public opinion should be educated; men should speak out in no uncertain tone in the family, in the pulpit, through the press. Men should be made to understand the grave responsibilities connected with the question of heredity. Would to God that each night, when the stars creep out in their serenity, that there might also appear upon the azure canvas athwart the heavens, written in illuminated letters, this injunction: "The iniquities of the fathers are administered unto the children of the third and fourth generation." "He that hath ears to hear, let him hear."

And now, is it possible, by any human agencies, to lengthen life? If so, what are they, and how are they to be applied?

Those of you who have followed me in this address can not fail to see that my effort has been to show that the present low average of human life came not by Divine edict, but first, by gross and persistent neglect of sanitary laws; second, from the presence of diseases in the earth which are largely due to unsanitary surroundings and to the violation of the laws of health, and therefore largely preventable by man; third, by an almost total disregard of the laws of heredity.

If these things are true, then man can do almost every thing to correct the evil influences which have contributed toward weakening his constitution and shortening his period of existence.

Man must come to understand that cleanliness is closely akin to godliness. That a clean life with clean surroundings are the two things needful in the prevention of disease. When we shall have pre-

vented disease by wise sanitation, the battle for long life will have been more than half won.

Man must be supplied with an abundance of pure air, pure water, and life-giving sunlight. He must be provided with a comfortable home and cheerful surroundings. He must have employment and recreation, rest and exercise. These are but a tithe of the requisites to insure health. Each of these subjects is of sufficient importance to demand an entire hour. I can not attempt to discuss them, I can only hope to blaze the way.

Pure air can not be overestimated in its relation to health. As the purity of the air depends largely upon the surroundings, all decaying vegetable and animal matter must be disposed of. Malarial regions must be drained. Cities must be sewerred. The dead must be cremated. The prejudice to this mode of disposing of the dead will be overcome at no distant day.

Dwellings must be properly ventilated ; people must be made to understand the value of pure, fresh air. Consumption, the arch enemy of the human race, finds its chief ally in the impure air of our poorly ventilated houses. A poorly ventilated house is worse than no house at all ; people would live longer out of doors, in tents, or under shelters, or under the canopy of heaven, than in the death-traps of our crowded cities, which pass under the name of dwellings.

Next to the air, water is perhaps the most common medium by which the germs of disease reach the human system. Typhoid fever, dysentery, cholera, are diseases which are notably propagated in this way. If an individual will drink perfectly pure water and permit no unsanitary surroundings, he will live to be as old as Methuselah, without ever contracting typhoid fever or cholera. There can be no health without pure water. Every city and every family should spare no labor or expense to obtain an ample supply of pure water for domestic purposes. At no distant day the water supply, in both the country and city, for household purposes will be filtered and tested as to its purity before using.

Men must be taught the duty of living abstemiously, temperately ; they must learn that eating and drinking are not the chief ends of life, but only incidental. The consumption of food is incidental to man's existence just as fuel is incidental to the steam-engine. No engine was ever constructed simply to consume fuel, and that engine is the best which exhibits the greatest power with the least consumption of fuel.

Man is certainly a reckless eater. He pays but little attention to what he eats, and less to the quantity.

My observation leads me to assert that eighty per cent of our people eat twice as much as they actually require to support the body in vigorous health. Most men eat like Dugald Dalgetty, who ate to prepare for anticipated want rather than for present necessity.

It is marvelous how the human stomach is able to maintain itself against such odds.

Whisky and tobacco ought both to go. No one denies that whisky swells the mortality rate by thousands, and tobacco is responsible for more heart failures than is generally accredited to it.

Our habits of life ought to be so modified and simplified that men will not be compelled to wear themselves out in the battle for existence. The majority of men are out of breath from one day's end to another, they do not take time to eat or sleep; no rest for brain or heart or body. There is no let up, no halt, no cessation. The busy, busy world whirls madly on, and the man who is unable to hold the pace drops out, feeling that he is a miserable failure.

Look at the physical wrecks as they lie thick along the race course of life, fallen before the half-mile post has been reached; then ask yourself if reform in this direction is not desirable.

Let us not forget that the entire fabric of our civilization, venerable though it be with six thousand years, sadly needs overhauling. There must be something radically wrong with any civilization whose influences are ever spoken of as enervating. May we not reasonably hope that the day will come when all that tends to effeminacy or degeneracy, though now accounted an actual necessity, may be eliminated from our home and social life. But the lack of time forbids my pushing the subject further.

And now how can these agencies be applied? I answer, the gospel of "*Long Life*" should be disseminated in every way possible; it should be taught by physicians, in the family, by the press, and heralded from the pulpit.

Moral degeneracy has its preacher, why should not physical degeneracy? The task of the one would be made the lighter by the labor of the other. Men should be taught that short life is not necessarily man's inheritance, that life has been lengthened, still can be, and ought to be.

Societies for the promotion of the public health should be organized everywhere. Physical culture should receive constant attention in the

family and in the schools. Physiology and hygiene should be taught in all our schools and colleges. Boards of health—international, national, state, county, and city—should be organized, clothed with peremptory powers to act in all matters which concern the public health. I am glad to see that these matters are already receiving attention as never before.

It gives me great pleasure to note the efficient work being done by the Kentucky State Board of Health. The President, Dr. J. M. Mathews, and the Secretary, Dr. J. N. McCormack, and every member of the Board are entitled to the thanks not only of this Society but of the entire State for their faithful and valuable services.

And now one word to my fellows of the medical profession as to the part they are to perform in this important work of lengthening human life, and I am done.

You are to be the guides, the advisers, the shapers of public opinion. What a grand calling is yours! No more important calling in life than to be the custodians of the public health!

William E. Gladstone, in an address last year, said: "Medicine to-day is the most progressive science in the world."

Ex-Judge Noah K. Davis, of New York, said, in the session of the International Medico-legal Congress, held in September, 1895, "The first profession in the world is that of medicine."

Truly, ours is a noble profession, the field of our ministrations is as varied as the climatic conditions which exist from the Vale of Chamouni to the summit of the Matterhorn.

Like the Great Physician, we should not hesitate to gird ourselves with a towel and wash the feet of humanity; at the same time we ought to be ready and capable of giving advice in regard to the deepest and most intricate problems of life.

When thinking of the broad calling of the physician, I am ever reminded of that scene, which is described as transpiring in a Roman theater two thousand years ago, when for the first time that ennobling sentiment from one of the plays of Terence was placed upon the stage, "I am a *man*, and nothing that pertains to *man* can be *foreign* to my *bosom*." It is said that the entire audience arose electrified and shout after shout rent the air.

If there is a physician within the sound of my voice whose heart does not share this sentiment to the echo, then, my friend, let me say to

Then, as physicians and as philanthropists, let us stand ready to lend the helping hand to our race in winning back the much-to-be-coveted jewel of long life.

But in turn we must demand of our fellow-men their confidence and support. In moments of discouragement and doubt they must not stand ready to toss overboard compass and chart, falling in with some superannuated superstition.

They must not be eager to adopt old "wives' fables" in lieu of truth—truth which it has required ages of labor and research to establish.

If, however, after all our proffers of help and guidance, men will not hear us, then there is nothing left for us more, and with Perdita, the disappointed shepherdess, we can only "milk our ewes and weep."

But I think better of man's sagacity. I believe he will hear, and in time he will heed us.

The revolution will not come suddenly, but slowly and surely.

This subject will gradually attract attention, and grow year by year. After a while men will become enamoured and enthused with the thought of perfect physical manhood and long life. They will come to understand that physical degeneracy and short life are largely the results of human folly. To be puny and short lived will be looked upon as involving personal disgrace. Each generation will consider it an honor to be enabled to add something to the span of human existence. Not many generations will have been gathered to their fathers until it shall be no uncommon thing to see men of three score years and ten, with the "eye undimmed and the natural force unabated."

The now farthest limit of human life will become the average, and when one (like the sturdy old Scotchman), shall so far forget himself as to "slip awa'" even at seventy, members of his family will feel it incumbent to make labored explanations at the "*beerial*."

And now, in conclusion, may I not even express the hope that a very large number of this intelligent audience, who have heard me so patiently and so thoughtfully, may find it in their hearts to say, in the language of the Bard of Avon—

"Good sentences, well spoken:

They would be better, if well followed."

FACIAL ERYSIPELAS.*

BY JOHN EDWIN HAYS, A. M., M. D.

Professor of Anatomy and Dermatology, Hospital College of Medicine.

Every physician in general practice occasionally encounters a case of erysipelas. While no region of the body may be said to possess an immunity from its invasion, observation teaches us that the face is the part which is more often involved than any other.

The clinical phenomena presented by a case of facial erysipelas are well known. So exceedingly characteristic is its clinical picture that any one who has once seen a typical case of it will hardly fail to recognize the disease when meeting it again.

It may have its commencement on any part of the face, the starting point being determined by a solution of continuity of the skin or adjacent mucous membrane. This wound or abrasion may be so slight as to be entirely overlooked in many cases, yet it must undoubtedly exist. When the disease once starts in this region it spreads on all sides, successively invading the skin until the whole face has been covered. In mild cases it has a tendency to terminate when it reaches the margin of the hairy scalp. In severer grades, however, it usually extends its sphere of activity, invading not only the scalp but also the neck and shoulders to a greater or less extent.

In the face the deformity produced by the swelling is often very great. Especially is this the case in those situations where there is an abundance of loose connective tissue, as in the lips and eyelids.

The skin over the affected area is quite painful to the touch, bright or dusky red in color, tense and shiny. In a day or two the skin is usually covered with large blebs. The constitutional symptoms vary greatly in different individuals and in different cases. They are usually, however, of such a character as to indicate a severe disturbance and depression of the vital forces. The fever, which is persistent throughout the attack, sometimes becomes alarmingly high, the course of the temperature being influenced largely by the systemic condition of the patient, by the progress and intensity of the local inflammatory process

departures from the usual course, but to direct your attention to a few of the salient points bearing upon its etiology and treatment.

Concerning the causation of erysipelas our knowledge at this time is sufficiently far advanced to admit of exact statements as to the rôle played by micro-organisms. The etiology of this affection during the last few years has been exhaustively worked out, and its bacterial nature fully demonstrated by many experimenters, prominently among whom may be mentioned the names of Fraenkel, Orth, Koch, and Fehleisen. To Fehleisen especially belongs the honor of first demonstrating beyond dispute, in 1884, the microbial origin of this affection. He found in his investigations and laboratory experiments that the special pathogenic germ of erysipelas was a streptococcus. Fehleisen not only isolated this germ, but proved that it fulfilled every requirement of Koch's laws. It is now universally admitted that every case of erysipelas, occurring on the face or elsewhere, is etiologically connected with this streptococcus, and that no attack can develop without the presence of this germ as a specific cause.

There has been quite a controversy of late regarding the relationship of the streptococcus erysipelatis and the streptococcus pyogenes, many bacteriologists confessing their inability to draw a strict line of demarkation between the two, so closely do they resemble each other in their shape, life history, and also in the pathogenic effects that each is capable of producing. This question is still an undecided one. Experiments go to show that the streptococcus of erysipelas is not capable of penetrating an unbroken skin or mucous membrane, consequently, in order that it may gain entrance to the lymph spaces, it is essential that some breach must exist, although in many instances this breach may be very slight and easily overlooked. The face, although not possessing special vulnerability to this special microbe above other parts of the body, readily provides, on account of its unprotected state, an easy channel for its entrance whenever the skin is wounded in any way.

It should always be remembered that predisposition is an important factor in the etiology of this disease.

The predisposing causes include every thing that can impair the general health and lessen the resisting power of the tissues. Among the most prominent of these causes may be mentioned bad and insufficient food, continued exposure to rough weather, overcrowding imperfectly ventilated sleeping apartments, and intemperance. Some individuals

have a "susceptibility" to erysipelas, having as many as two or three attacks in a year. This recurrence is largely made possible by the continued operation of some of the above mentioned factors which render the tissue an easy prey to the invasion of the specific germ.

The constitutional treatment of erysipelas should largely depend upon these predisposing conditions, a very important factor being to improve as far as possible the general sanitary and hygienic surroundings of the patient. On account of its contagiousness the patient should be isolated, and every precaution taken by the physician and nurse to prevent its spread.

Of internal remedies in erysipelas I am bound to speak well of iron, always using the "old and well-tried" preparation, known as the tincture of the chloride. As an internal treatment this preparation probably does not now hold the same exalted place in the confidence of the profession that it once did, yet it is still without any formidable rival. Quinine is useful if given in small doses. All medicines that depress, such as the coal-tar derivatives, should be carefully avoided. Strychnine is a remedy which should have a prominent place in the internal treatment of this disease. In this drug we have our most rapid and reliable heart stimulant, and it is especially serviceable in the disease under consideration when the cardiac nerve centers become depressed by the presence of toxic principles circulating in the blood.

Local treatment, which is chiefly intended to check the spread of the micro-organisms in the tissues, yields results that are reasonably satisfactory in a large majority of cases.

The first indication in the local management of a case is to carefully cleanse and disinfect the wound which afforded a point of entry to the germ.

As an application to the inflamed area ichthyol is regarded as a valuable remedy. Fessler made some experiments a few years ago, with a view of determining the germicidal power of ichthyol on the erysipelas coccus. He found that its power in this direction was very decided. One part of the ichthyol in four thousand of bouillon being capable of completely arresting the growth of the coccus. Fessler also reported fifty-three cases of erysipelas treated by ichthyol alone, with

Klein, in a recent article on the subject, reports thirty-four cases of erysipelas treated locally with ichthyol with a mean period of six days. He is convinced that his favorable results were due to the efficacy of the remedy. The best method of using the ichthyol in these cases is in the form of an ointment, made of equal parts of ichthyol and vaseline, or in the form of a varnish, made by mixing two parts each of ichthyol and ether with four parts of collodion. The affected area and the adjacent healthy skin should be thoroughly covered with the ointment or the varnish. The latter appears to be preferable to the ointment, on account of better excluding the air from the part and at the same time affording gentle pressure and giving rise to the sensation in the part as if it were lightly surrounded by a bandage, which is decidedly grateful to the patient.

A recent experience with ichthyol in this affection, although satisfactory to some extent, was not as much so as the published results had led me to hope. Nevertheless the large number of reported cases in which the results have been extremely good indicate that the remedy is certainly of great value.

The method of Hüter, which consists in the intra- and sub-dermal injections of a three-per-cent solution of carbolic acid in the skin adjacent to the inflamed parts, with a view of checking the spread of the microbes, is not practicable about the face on account of the pain incident to the frequent use of the needle and the danger of poisoning that may result from a too free use of the drug.

Kraske's method of scarifying the involved part and overlaying it with carbolized or sublimated compresses has not been found sufficiently serviceable to compensate for its palpable disadvantage.

Winkler advises, in a recent contribution, the local use of a solution of tannin, camphor, and ether, and claims that a cure is frequently brought about in two or three days. He also warmly recommends aqueous solutions of creolin.

In my experience, the local application which has yielded the best results is a mixture composed of carbolic acid, tincture iodine, alcohol, each one part, ol. turpentine, two parts, and glycerine, three parts. A very thorough application is made every two hours over the inflamed area, and a short distance beyond it. The parts are then covered with several thicknesses of antiseptic gauze. This mixture can be

tive powers into the tissues. A drug applied to the surface of the skin can have no restraining or destroying effect upon the erysipelas germ unless it is capable of penetrating the capillary lymphatics. A host of other remedies might be mentioned which are regarded as more or less useful in the local treatment of this disease. In this connection, however, it should be borne in mind that erysipelas is a disease which varies greatly with the individual, consequently no two cases are identical—a fact which makes it very difficult to correctly estimate the effect which any drug may exercise upon the pathological process.

LOUISVILLE.

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, April 3, 1896, Dr. W. L. Rodman, President, in the chair.

Exhibition of Pathological Specimens. Dr. A. M. Cartledge: I present some gall-stones that I removed yesterday. The only interesting feature is the great number of them; there are 1,407 altogether. The man was thirty-eight years of age, and had four severe attacks of gall-stone colic in the last year. He had a very severe attack last Sunday, lasting over four hours, which made him consent very readily to the operation.

Report of Cases. Dr. Thomas S. Bullock: I was called to see in consultation, a few nights ago, a woman having eclamptic attacks. She was pregnant, at full term, had intense headache, edema of the eyelids and lower extremities, face, etc. She had been given a hypodermic injection of $\frac{1}{4}$ grain of morphine and $\frac{1}{160}$ grain of atropine about five o'clock in the morning. Shortly after the doctor left her she had a convulsion, and about noon became comatose. It was in this condition that I saw her about nine o'clock at night. The os was dilated to about the size of a dollar and very tense, the membranes unruptured, and no attempt at uterine action. She was having convulsions every half hour. I immediately gave her four or five drops of croton oil in castor oil and a dram of chloral *per rectum*. I then ruptured the membranes and was able to excite uterine action. Forceps were applied, and after prolonged effort

she was delivered of an enormous child, which was dead. As soon as the child was born the woman had no further convulsions. I was unable, even after repeating the croton oil, to get a movement of the bowel. She remained comatose, and died four hours after the delivery.

This case to my mind strikingly illustrates the bad effects resulting from an attempt to relieve convulsions in a pregnant woman by means of opium. I have seen only two cases in which this mode of treatment was carried out, and both died. Five cases treated by the eliminative method terminated in recovery. If this woman had been given a brisk purgative and a dram of chloral by the mouth or rectum, in all probability the result would have been different.

Dr. J. A. Larrabee: It seems to me that the time eliminative treatment would have been most effective was past. There is no question as to the proper treatment of this condition by warding it off by persistent purgation, and possibly elimination in other ways. It is incumbent upon us when we have notice of attendance upon a woman to make an analysis of the urine. In the convulsions I have had better and more immediate results from *veratrum viride* in full dull doses—half a teaspoonful—than any thing else.

Dr. F. C. Wilson: In these cases I have been in the habit of using chloral, relying upon it more than any other agent. As Dr. Larrabee has said, all these cases should be investigated and treated beforehand. I have used pilocarpine, injecting $\frac{1}{10}$ grain or more hypodermically. Elimination through the skin is much more rapid than by catharsis. I have seen a number of cases treated in this way get through favorably.

Dr. J. G. Cecil: It seems that the advocates of the opium treatment are absent to-night. While I have always been on the other side, yet I feel that there may be something said in favor of opium in these conditions. It is urged by the advocates of the opium plan that it should be used with a very free hand; that the patient should be kept completely under the drug to enable it to overcome the effects of any ingredient in the blood which may be causing the convulsions. After you have gotten free elimination I do not see any objection to morphine, and I have used it with advantage. However, I am in accord with what has been said in regard to the use of opium, and I mention these points because there are many good men who advocate the use of opium and who use it with a free hand—they narcotize the patient.

Dr. William Bailey: I think the proceedings of this Society show that this subject was fully discussed not very long ago. I am fully in

accord with the statement of Dr. Bullock that opium ought not to be used under the circumstances under which it was used here, but I believe that after elimination is accomplished by free purgation and the function of the kidney has been in a measure restored, there is no remedy in these cases in which convulsions continue that is at all comparable to opium. I have seen it used with the greatest benefit in such a case. I have a case under my care now that has given me some concern. In Scotland, two years ago, the patient suffered with puerperal convulsions. She has been under my supervision two months, trying to bring her to full term without danger. I have been looking very carefully after the secretion of the kidney. She is passing five pints of urine a day, and I am questioning whether I would not do better by restraining elimination. Of course, with this large volume of water the specific gravity is below the normal. There is not a trace of albumin. It may be injurious to the kidney, I take it, to pass so much urine as is being done in this case.

Dr. William Cheatham: I have seen many cases in which the eye was involved, and we advised against impregnation. Yet I have seen impregnation frequently a second time, but have never seen a recurrence of the inflammation of the eye.

Dr. J. M. Ray: I recall a patient who consulted me about two years ago. She gave a history that with each previous pregnancy she had a good deal of eye trouble, and in the pregnancy previous to that in which I saw her she had been almost blind at times. There were very extensive exudates in the macular region, and from the history she gave there must have been changes in the eye at the previous pregnancy.

Dr. J. A. Larrabee: I do not believe that all cases of puerperal eclampsia are due to the same cause. If the case is due to a uremic condition, I do not see how opium could do any thing but harm. If we have a condition that will be benefited by opium, the pupil will be dilated. In infancy there are many cases of convulsions which the bromides and chloral fail to relieve; in all of these the use of opium gives immediate relief. In all these cases the pupil is dilated.

Dr. Bullock: In regard to the point made by Dr. Larrabee, that in all probability the patient was in such a condition that no treatment would avail, I would like to differ from him. I have seen cases in which the symptoms were as grave, in which rapid emptying of the uterus together with the treatment I have outlined was followed by

covery. The only cases in which I have seen death were those in which opium had been used. I do not mean to censure the attending physician, but merely report the case to illustrate the inadvisability of giving opium in puerperal eclampsia. Of course the etiology is unsettled, but I believe the majority of authorities consider that in most cases it is due to defective elimination by the kidney and the retention of substances which should have been eliminated.

Dr. Wilson: I reported a case, several years ago, of a family of "bleeders," in which an infant was lost by hemorrhage from the umbilical cord. Some time after this the woman again became pregnant, and I undertook to anticipate the occurrence by putting her on a course of iron and turpentine, with the idea of lessening, if possible, the tendency to bleeding. Whether that was carried too far or not, she miscarried at about six and one half months with a dead fetus. She is now pregnant again, and I have refrained from any effort in that direction more than an invigorating and building up the general health. What I want to know is the best method of dealing with the cord; whether the dry method, leaving it untied and treating it with a drying powder, or what method would offer the best hope of preventing dangerous hemorrhage from the cord when it separates. The child up to this time is vigorous and strong, and the mother seems healthy.

Dr. Larrabee: The fact with regard to hemophilia is that it is a hereditary, but of what it consists we do not know; whether it is an impairment of nutrition of the vaso-motor system, or whether it is a condition of the blood itself. I do not believe it is the latter, and do not think that iron to build up the blood would have any effect in such a case. In the person of adult bleeders I believe the acid treatment is done more good than any thing—simply the continued use of mineral acids, preferably sulphuric, rendering the blood more coagulable.

The essay was read by Dr. John E. Hays: subject, "Facial Erysipelas." [See p. 456.]

Discussion. Dr. Thos. Hunt Stucky: I have been much interested in the paper of Dr. Hays, and feel that he has left little to be said. As stated, it has been clearly demonstrated that the streptococcus pyogenes and the streptococcus erysipielatis are identical. Erysipelas, I take it, is a self-limited disease, and will relieve itself without constitutional treatment. The utility of the chloride of iron I question; and I

believe it is the tendency of writers at the present time to doubt its value. In these cases I believe we accomplish as much by topical applications as by constitutional treatment. A favorite topical application seems to be alcohol in some form. Equal parts of alcohol and glycerine have given me as good results as any thing else. Whether it exercises any curative influence is doubtful. I have never had any hesitancy in using any of the newer antipyretic drugs. If it be true that endocardial inflammation sometimes follows erysipelas, we should be on our guard. My treatment consists of attention to the eliminative channels, sedative applications to the part and support, as far as possible, by diet. As to the probable benefit which may accrue from injections at a point away from the erysipelas line, this plan was carried out very extensively a year or two ago in Philadelphia, but was not found satisfactory. The injections are painful, and abscess sometimes followed. I believe, as stated, that the entire management is summed up in elimination and support.

Dr. Cecil: I depend very largely upon glycerine as an external application, and do not give any thing at all with the expectation of curing the disease. In recent years I have found myself unable to check it in any sense of the word. The last case I had commenced at the site of a vaccination, and traveled over nearly the entire body. I used every thing except the hypodermic method of treatment, but I could not see that I affected in any way the course of the disease. I do not believe that iron will in any measure shorten the course of erysipelas, and consequently I do not prescribe iron. Quinine, looking to the same end, I do not give, but would give it for the same purpose that I give any other tonic. The hypodermic injection of carbolic acid, with the idea that you would throw something in front of the advancing army of micro-organisms that would stop their progress, has never seemed to me a rational treatment. I think it can be deduced from what I have said that I have no faith in any constitutional treatment to shorten the disease. With a strong, bounding pulse in a robust subject, I would not be afraid to give phenacetine in a full dose, but would prefer sponging, or the cold bath.

Dr. Cartledge: It seems to me that modern bacteriological investigation has demonstrated that complicated erysipelas is quite different from uncomplicated erysipelas. The pathology of the disease must be kept constantly in mind in order to properly treat it. The organism of erysipelas, most investigators believe, is not the same as the strep-

coccus pyogenes, and many things go to prove this. In the first place, the erysipelas coccus is not a pyogenic organism; all the complications which come are in the nature of mixed infections with pyogenic organisms. The only object in treatment is to protect the infection from secondary infection by pyogenic germs, and the various local remedies are of use only for this purpose. As to iron in erysipelas, it is of use only in so far as it is a constructive agent. Dr. Cheatham could probably find that the immunity which the eyeball seems to enjoy is due to the fact that it contains fewer lymphatics than the surrounding structures.

Dr. Rodman: I have nothing to say except to indorse what Dr. Cartledge has said about the organism. I do not think the identity of the two has been established.

Dr. Larrabee: In regard to the first point made—the etiology—course has been determined to be a microbe. Erysipelas is dangerous in proportion to the extent of surface involved, and it seems to me that agents which have been proven by experience to limit the disease ought to be used. A little consideration of the local treatment will bring you to this point, that all the agents which have been used locally have proven beneficial by their power of contracting the skin and approximating the lymph spaces beyond the disease. A medicine simply placed in contact with the skin will not reach this microbe and kill it. The Velpeau treatment was simply a strong solution of sulphate of iron. In this plan of treatment and in all the local stringents the good effects are produced by contraction of the skin. The point made by Dr. Cartledge is a very good one. We have here a microbe that does not produce pus unless others are engrafted upon it. Those who have had army experience must have been struck with the morbidness with which delirium occurs, due to the presence of a toxin in the blood. Iron does its work by increasing the oxidizing power of the blood, and it is proven that iron introduced in large doses has the property of completing oxidation; in doing this it affords the best means of attack upon the germ that we have. I think I have seen an attack of erysipelas cut short by an emetic and through cleansing of the system, just as you cut short an attack of tonsillitis.

Dr. William Cheatham: I have seen cases in which the sense of smell was involved, but have never seen any permanent bad results. I have never seen any permanent change in hearing. It is marvelous how the eye escapes in these cases. The main danger is embolism of

the arteries in the retina. Another way in which the eye may be involved is by formation of pus in the orbit.

Dr. S. G. Dabney: Atrophy of the optic nerve is the most frequent serious complication of the eye. Just how this neuritis occurs—whether it is due to a thrombus or to extension of the cellulitis—is a little obscure. I think it is reasonable to account for it as a cellulitis pressing upon the nerve and causing atrophy. There is one disease that presents many points of resemblance to erysipelas—Ludwig's angina. The mortality is very great, and the number of cases that have been reported is not over fifty or sixty.

A case lately that gave me a great deal of trouble was erysipelas following an operation upon the septum. About three days after the operation the patient developed an active case of erysipelas, the temperature running up to 105° . Dr. Cheatham has had one similar case, which resulted fatally, I believe.

Dr. Ray: I can substantiate the point that atrophy is due to pressure. I had a case in which the cellular tissue became involved, causing exophthalmus, and going on to atrophy.

Dr. Wilson: No disease in the whole category of diseases is so inclined to shake the faith of the physician in the efficacy of medicine as the one we have under consideration. I remember one case which I thought to nip in the bud. It started at a point near the nose, spread all over the face, through the scalp, down the back of the neck, over the trunk, down the lower extremities, and out on the arms to the tips of the fingers. It takes about four days for the inflammation to run its course at one point. If you watch its progress at one point you will see distinct vesication occurring on the fourth day. This fact has been suggestive of one method of treatment that is really efficacious, namely, the anticipation of this stage by the application of an ordinary fly blister. This may be used over the face without any danger of scar. In this way you arrive at the end of the course in two days instead of four. The efficacy of this plan of treatment may be explained by the effect of cantharides upon the microbe itself, in addition to the relief of the congestion by the vesication.

Dr. Hays (closing the discussion): I have very little to say. I regard the identity of the streptococcus pyogenes and the streptococcus of erysipelas not yet proven. There was, however, reported lately in a Philadelphia journal the case of a surgeon who performed an operation for empyema in a child. During the operation he injured his cheek

with a fragment of rib. In thirty-six hours it began to pain him, and there was evidence of inflammation, and in a short while he developed a typical case of facial erysipelas. Pus from the case of empyema was examined, and no other organism than the streptococcus pyogenes found. I think this case teaches somewhat forcibly the identity of the two, although I am still inclined to believe, like Dr. Cartledge, that where involvement of the cellular tissue and suppuration take place, there is a mixed infection.

As to the treatment of these cases, I advocate all measures tending toward support of the patient, endeavoring to put him in as good condition as possible, and would most heartily condemn treatment by the use of modern antipyretics, because they depress the patient still further. From the experiments made by some German investigators, it would seem that ichthyol, carbolic acid, and iodine, even in solution of feeble strength, tend to prevent the development of the erysipelas focus; and I am satisfied that if we could make use of some method by which these remedies could be brought into contact with the germ, we would very much shorten the disease. I do not advocate the use of hypodermic injections, but simply mentioned it as a method of treatment which has been used. I doubt very much if an abscess would be produced by using solutions of carbolic acid of the strength mentioned in my paper, provided the needle and solution were sterilized. But as one injection must be frequently repeated, there is some danger of introducing a poisonous amount of the drug.

JOHN L. HOWARD, M. D., *Secretary.*

A MEDICAL MISSIONARY HONORED BY THE EMPEROR OF CHINA.—Dr. Eli Barr Landis, of the class of 1888, Medical Department of the University of Pennsylvania, ex-resident physician of the Lancaster County Hospital and Insane Asylum, has recently had conferred upon him the order of the Double Dragon by the Emperor of China, for services rendered during the war between China and Japan. Dr. Landis is now on his way to Chemulpo, Corea, after a brief leave of absence, to resume his connection with the Church of England Mission in St. Luke's Hospital, in which institution he has held a position for about six years.—*Boston Medical and Surgical Journal.*

Reviews and Bibliography.

Twentieth Century Practice: An International Encyclopedia of Medical Science. By leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M. D., New York City. In twenty volumes. Vol. 5, Diseases of the Skin. 905 pp. Vol. 6, Diseases of the Respiratory Organs. 743 pp. New York: William Wood & Co. 1896.

The contributors to volume five are Charles W. Allen, M. D., New York; John F. Bower, M. D., Boston; L. Duncan Bulkley, M. D., New York; L. Brocq, M. D., Paris; H. Radcliffe Crocker, M. D., F. R. C. P., London; James Nevin Hyde, M. D., Chicago; Moriz Kapor, M. D., Vienna; D. Leloir, M. D., Lille, France; Douglass W. Montgomery, M. D., San Francisco; Arthur Van Harlingen, M. D., Philadelphia.

To the sixth volume the contributors are Winslow Anderson, M. D., M. R. C. P., M. R. C. S., San Francisco; Frank H. Bosworthe, M. D., New York; George A. Gibson, M. D., D. Sc., F. R. C. P. (Ed.), Edinburgh; Prosser James, M. D., M. R. C. P., M. R. C. S., London; E. J. More, M. D., Bordeaux; Sir Thomas Grainger Stewart, M. D., F. R. S., F. R. C. P. (Ed.), Edinburgh; and Jonathan Wright, M. D., Brooklyn.

These two volumes of Twentieth Century Practice are if possible an advance on the first four, and, without qualifying the term, they may be characterized as simply exhaustive, as present day medicine is concerned. The physician who passes over into twentieth century practice will have something to complain of in his lot if he finds himself unable to supply himself with this superb work.

D. T. S.

The International Medical Annual and Practitioner's Index. A Work of Reference for Medical Practitioners. Fourteenth year. 727 pp. Price \$2.75. New York: E. B. Treat. 1896.

The reputation of the Medical Annual is well maintained in this the fourteenth volume. There is year by year a marked improvement in the matter of disparagement to wonderful therapeutic discoveries. There needs, however, a step further to be taken. The most of the so-called discoveries, such as we have been too much taken up with of late years, have been the creations of notoriety seeking prevaricators, who deliberately and for a purpose have falsified the record. If they would be named for the medical world and blacklisted the profession would be saved much needless disappointment, and suffering patients a world of imposition.

The material of the Medical Annual is well digested and makes interesting reading, and has none of the dullness of mere reports. The list of contributors embraces many of the foremost names in this country and in Europe.

D. T. S.

Uric Acid as a Factor in the Causation of Disease. A Contribution to the Pathology of High Arterial Tension, Headache, Epilepsy, Mental Depression, Paroxysmal Hemo-globinuria and Anemia, Bright's Disease, Diabetes, Gout, Rheumatism, and other Disorders. By ALEXANDER HAIG, M. A., M. D. (Oxon.), F. R. C. P., Physician to the Metropolitan Hospital and the Royal Hospital for Children and Women; Late Casualty Physician to St. Bartholomew's Hospital. Third edition, with fifty-four illustrations. 600 pp. Price, \$3.00.

It is not to be expected that a painstaking, persevering, and industrious investigator, dominated by an idea, would fail to gather all the important facts bearing on his theme. The author is carried away with his subject in part and with himself in part, with the result of wresting and magnifying the bearing of almost every fact and argument produced to the furtherance of his theory. The work is, however, decidedly suggestive, and to whoever has time and taste for this character of discussion can not be read without profit.

D. T. S.

Diagnosis and Treatment of Diseases of the Rectum, Anus, and Contiguous Textures. Designed for Practitioners and Students. By S. G. GANT, M. D., Professor of Diseases of the Rectum and Anus, University and Woman's Medical Colleges, Kansas City, etc. With two chapters, "Cancer" and "Colotomy," by HERBERT WILLIAM ALLINGHAM, F. R. C. S., England. One volume, royal octavo. Illustrated with 16 full-page chromo-lithographic plates and 115 wood engravings in the text. Extra cloth, \$3.50. Half-russia, gilt top, \$4.50. 400 pp. The F. A. Davis Co., Publishers, Philadelphia, New York, and Chicago.

Among the many merits of this book not the least is the use of no more words than are necessary to proper exposition of the subject. The subjects are well classified, so that little trouble is had in finding just what is wanted. The illustrations are of a high order, and the letter-press inviting. It is thoroughly up to date, and, besides the subjects usually treated of in rectal works, it has a chapter on "Railroading as an Etiological Factor in Rectal Diseases," and "Auto-Intoxication or Auto-Infection from the Intestinal Canal." Altogether it is a full and fair exposition of the subject to which it is devoted, and will take high rank with works of its class.

D. T. S.

Weekly Abstract of Sanitary Reports. Issued by the Supervising Surgeon-General, Marine Hospital Service. Vol. 10, Nos. 1 to 52. Washington: Government Printing Office. 1896.

Transactions of the American Surgical Association. Edited by DEFOREST WILLARD, A. M., Ph. D., Recorder of the Association. Vol. 13. Philadelphia: Printed for the Association and for sale by William J. Dornan. 1895.

Transactions of the American Orthopedic Association. Ninth Session. Held at Chicago, Ill., September 17, 18, and 19, 1895. Vol. 8. Philadelphia: Published by the Association. 1896.

Transactions of the American Ophthalmological Society. Thirty-first annual meeting, New London, Connecticut, 1895. Hartford: Published by the Society. 1896.

Transactions of the College of Physicians of Philadelphia. Third series. Vol. 17. Philadelphia: Printed for the College. 1895.

Abstracts and Selections.

RADICAL TREATMENT OF PROSTATIC HYPERTROPHY.—Bruns (*Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie*) from a careful study of available clinical records, draws the following conclusions on the present position of castration as a method of treating hypertrophy of the prostate: The results of this operative treatment agree with those of experimental research in showing that there is a close physiological connection between the prostate and the testes, and that the development and healthy condition of the former depend on the integrity of the latter organs. In a large proportion—83 per cent—of 148 cases collected by the author, castration was followed by a decided wasting of the enlarged prostate. This wasting usually begins very soon after the operation, and in the course of a few weeks the organ is reduced to almost its normal volume. In the soft and succulent forms of prostatic enlargement the prognosis of castration is more favorable than in cases in which the prostate is tough and firm. There can be no doubt that castration is followed not only by reduced vascularity of the enlarged prostate, but also by shrinking and fibroid degeneration of the glandular tissue. As the vascular supply of the prostate is independent of that of the testes, this atrophic change can only be attributed to a nervous influence. Although after castration the restoration of the functions of the bladder is less certain than atrophy of the bladder, the surgeon may fairly anticipate that the operation will result in decided relief in a large proportion of cases, and in complete cure in a few. Bruns arranges the successful cases in three groups. In the first, which comprises cases of dysuria without retention, the operation usually results in cessation of the frequent and urgent desire to pass urine, and in diminished frequency of micturition. Even after long-continued dribbling the urine may at the patient's will be discharged in a full stream. Prostatic subjects suffering from retention, who for some few weeks only before the operation have been compelled to use the catheter, are, as a rule, enabled to dispense with this instrument, and to pass urine spontaneously. Those who have suffered from chronic retention, which has necessitated for many months or even years the habitual use of the catheter, may be released, after castration, from the necessity of thus emptying the bladder. In about a third of such cases such improvement follows the operation that the catheter can be used less and less frequently and with greater ease. In most cases which have been treated by operation there is, if not complete cessation, considerable alleviation of the symptoms of vesical catarrh. Double castration, though an easy operation, and in itself free from any immediate danger, is open to a serious

objection even in patients of advanced age. Cases have been recorded in which it has been followed by nervous depression and mental apathy. For this reason the author thinks that a fair and extended trial should be made of simple resections of the vas deferens. The results of this operation have hitherto been encouraging, but further experience, he thinks, is required before any conclusive estimate can be formed as to its efficiency. At present the most certain method of treating prostatic hypertrophy, especially in the earlier stages of the disease, is double castration.—*British Medical Journal*.

MENTAL VIGOR AND LONG LIFE.—The Medical Record quotes the following from the National Popular Review:

"Great men usually carry their full mental vigor and activity into old age—M. Chevreul, M. de Lesseps, Gladstone, and Bismarck are evidences of this anthropological fact. Pius IX, although living in tempestuous times, reached a great age in full possession of all his faculties, and the dramatist Crebillon composed his last dramatic piece at ninety-four, while Michel Angelo was still composing his great canvases at ninety-eight, and Titian at ninety still painted with all the vigor of his earlier years. The Austrian General Melas was still in the saddle and active at eighty, and would have probably won Marengo but for the inopportune arrival of Desaix. The Venetian Doge Henry Dandolo, born in the beginning of the eleventh century, who lost his eyesight when a young man while on an embassy to Constantinople through the treachery of the Greek Emperor Manuel, was nevertheless subsequently raised to the highest office in the Republic, managed successfully to conduct various wars, and at the advanced age of eighty-three, in alliance with the French, besieged and captured Constantinople. Fontenelle was as gay-spirited at ninety-eight as in his fortieth year, and the philosopher Newton worked away at his tasks at the age of eighty-three with the same ardor that animated his physical prime. Cornaro was as happy at ninety as at fifty, and in far better health at the age of ninety-five than he had enjoyed at thirty. These cases all tend to show the value and benefits to be derived from an actively cultivated brain in making a long life one of comfort and of usefulness to its owner. The brain and spirits need never grow old, even if our bodies will insist on getting rickety and in falling by the wayside; but an abstemious life will even drag that old body along to centenarian limits in a tolerable state of preservation and usefulness. The foregoing list can be lengthened out with an indefinite number of names, but it is sufficiently long to show what good spirits and an active brain will do to lighten up the weight of old age. When we contemplate the Doge Dandolo at eighty-three animating his troops from the deck of his galley, and the brave old blind King of Bohemia falling in the thickest of the fray at Crecy, it would seem as if there was no excuse for either physical, mental, or moral decrepitude, short of the age of fourscore and ten."

HYPERTROPHIC PULMONARY OSTEO-ARTHROPATHY AND ACROMEGALY.—Thayer (New York Medical Journal) discusses the diagnosis of these diseases, and illustrates it by clinical histories and photographs of four cases. Three of these belong to the former disease, better called secondary hyperplastic osteitis by Arnold. In one the conditions followed a general bronchitis with effusive pleurisy; in the other two empyema was present, in one associated with bronchiectasis. The fourth case was one of acromegaly without apparent cause. The condition of the first three patients closely resembled that of the one described by Davis (Epitome, 1895, ii, par. 285, p. 57). The main points in the differential diagnosis are: In hypertrophic pulmonary osteo-arthropathy there are few or no changes in the face, the skin, nose, lips, orbital ridges, and lower jaw being practically unaffected; a certain amount of thickening of the alveolar border of the upper jaw has occasionally been described. The almost constant cervical kyphosis of acromegaly is also wanting; when kyphosis occurs it is usually in the lower dorsal or lumbar regions. Again, while the hand in acromegaly is enormous, with great thickening of the skin and soft parts and deep furrows, that of the other disease is much deformed as well, the terminal phalanges and wrists being much enlarged, while the carpal and metacarpal regions are but little affected. In the latter, also, the nails are pink and curved, producing the typical Hippocratic fingers, whereas in the former the nails appear small owing to the general broadening and thickening of the fingers. In acromegaly the long bones of the forearm and leg are but little changed, or more or less symmetrically thickened; in pulmonary hypertrophic osteo-arthropathy there is a most striking increase in the size of the bones toward their epiphyses, more particularly at their distal extremities. Finally the former process is purely secondary, usually to a lung affection, while the latter is a well-marked disease by itself.—*British Medical Journal*.

PANCREATIC LESIONS AND DIABETES.—Obici (*Boll. del Sc. Med. di Bologna*) investigates the present views upon the question, and points out that the results obtained by experiment differ from those obtained from clinical and experimento-pathological observations. He thinks it possible that some as yet unknown factor may have played a part in the experimental cases. He examined histologically two cases of diabetes which ran an equally rapid course and had the same amount of sugar excretion. In one the pancreas was absolutely healthy, in the other there was advanced interstitial pancreatitis. One must therefore beware of regarding all the more severe forms of diabetes as dependent upon a pure pancreatic lesion. The course of the disease in cases where the pancreas is markedly affected is not always the same, since in the second case the glycosuria diminished for some time with a flesh diet, which should not have occurred in a case which, according to prevalent ideas, was one of "pancreatic diabetes." Hirschfeld showed that, besides the pancreatic lesion in four cases, capillary

hemorrhages were also to be found in the neighborhood of the fourth ventricle. The author also describes two cases of interstitial pancreatitis and one of carcinoma of the pancreas with complete destruction of the gland, in all of which there was no glycosuria. In the first of these cases the interstitial pancreatitis was of vascular and lymphatic origin, which the author regards as characteristic for the pancreatic diabetes, since it hinders the outflow of the glycolytic ferment into the blood which, according to the author's theory, is secreted by the pancreas. The absence of glycosuria in this case is against this theory.—*British Medical Journal*.

THE TREATMENT OF SPRAINED ANKLE.—Gibney describes a method of treatment that he says involves no loss of time, requires no crutches, and is not attended with any ultimate impairment of function. The method is as follows: A number of strips of rubber adhesive plaster, twelve inches in length and appropriate width, are prepared. For a sprain about the external malleolus the first strip is applied, beginning at the outer border of the foot near the little toe and ending on the inner side of the foot about its middle, just under the plantar arch. The second strip is applied vertically, and passes from about the junction of the middle with the lower third of the leg, down along the side the tendo-Achillis, over the heel, and terminating at a point just above the internal malleolus, but posterior to it. The remaining strips are applied in the same way, each one overlapping the last about one half of its width, until the whole external malleolus and side of the foot up to the middle third of the leg are covered. It is well to reinforce just under the malleolus by strips passing criss-cross so as to give additional support to the injured part. Care should be taken not to completely encircle the ankle, which might cause injurious compression. For sprains of the tarsal or mid-tarsal joints or other parts the adhesive plaster is applied in the same manner, the idea being to give support to the part.

THE JENNER CENTENNIAL CELEBRATION.—The celebration of the hundredth anniversary of Dr. Edward Jenner's demonstration of the efficiency of vaccination as a preventive of smallpox, which before had been a deadly and ever-present scourge, has been fittingly undertaken by the American Medical Association. As a souvenir of the celebration, an excellent print of Jenner's portrait has been distributed.

By private letters from Central America, a most frightful epidemic of measles and mumps is reported to be raging in Costa Rica. More than ten thousand children are estimated to have died from these maladies during a period of three weeks. All official reports are vigorously suppressed for commercial reasons.

A CYCLING club for doctors is being organized in Brooklyn, N. Y. The movement originated among the students at the Long Island Hospital Medical College, but has now included a large number of the busy practitioners.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÆ."

Vol. 21.

SATURDAY, JUNE 13, 1896.

No. 12.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.
JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

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THE STATE SOCIETY.

The recent meeting at Lebanon was well attended, and bore fruit in a full programme of papers with liberal discussions. The discussions with most of the papers in due time will appear in the American Practitioner and News. This issue we are happy to present in full text the address of President Lewis with a half-tint of this distinguished gentleman.

Dr. Lewis chose for his theme the great hygienic question of longevity, and marks out in lines too clear to be mistaken the order of life that will certainly lead to length of days. He has no sympathy with the pessimism that counts life a burden, whines over the imaginary dangers of over-population, and curses with Job "the day wherein it was said a male child is born." He holds that life is worth living, and if worth living, it is worth living well. He therefore protests against vice and social wreck, and administers a fitting rebuke to men of influence (doctors and preachers for instance) who by precept and example contribute to the physical degeneracy of man through the drug addictions of tobacco and alcohol.

The pursuit of longevity along hygienic lines receives due attention; cholera, the plague, yellow fever, and indeed all zymotic diseases must capitulate in time, if they do not surrender unconditionally to science.

While the blights which diseases of heredity put upon the suffering race will be removed when enlightenment shall become fuller and men shall no longer forget the duty they owe to the coming generations.

The address is clear, strong, logical, optimistic, philanthropic, and religious, and its lessons should be carefully pondered by every physician who is a lover of his kind.

The honor of the presidency for next year falls upon worthy shoulders in being accorded to Dr. R. C. McChord, of Lebanon.

We here return our thanks to the authors of papers for the readiness with which they have placed them at our disposal for publication in this journal. As a result we may promise our readers a report of the transactions of unusual interest and fullness.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

At the first June meeting of this society, Dr. S. G. Dabney was elected president; Dr. Frank C. Wilson, vice-president; and Dr. Thomas Hunt Stucky, secretary, for the ensuing year.

The address of the retiring president, Dr. W. L. Rodman, was a record of more than common good work in medicine and surgery done by the Fellows.

The address was full of good suggestions looking to the future usefulness of this now veteran Society.

Such portions of it as are of general medical interest (and they are by no means few) we shall lay before our readers in our next issue.

Dr. Rodman has shown himself to be an able presiding officer, and much of the brilliant record of the past year's work was due to his ability as executive in dispatching business and saving time.

Notes and Queries.

ANTISEPTICS IN BEVERAGES.—The decision which Mr. de Rutzen gave in the case heard at the Westminster Police Court, and reported in another column, is one of considerable importance, owing to the influence it must inevitably have on the administration of the Food and Drugs Act. It was shown that a British wine contained 26.6 grains per gallon of salicylic acid. It was stated in defense that the drug was used as a preservative, and in a quantity so small that it could not be injurious to health. Evidence to the effect that even in small doses the drug might be injurious was given by Dr. Corfield (the Medical Officer of Health), and Mr. Cassal (the Public Analyst) for St. George's. The magistrate, however, accepted the evidence to the contrary effect, and held that the addition was not injurious to health, and seemed to imply that such addition, if made in quantities designed merely to obtain an antiseptic action, and not to increase bulk or conceal inferior quality, would prevent conviction under the Act. We believe that Dr. Corfield, in saying that the long-continued use of small doses of this powerful drug may be injurious to health, has on his side the support of medical experience and opinion. The decision is greatly to be regretted in the interests of public health, more especially as it offers a new excuse to vendors who wish to add various drugs to their foods and beverages "for antiseptic purposes."—*British Medical Journal*.

THE USE OF SILVER WIRE.—Halsted, in an article on Operative Hernia, states that for a year he has sewed all of his hernia wounds with silver wire and has covered them with silver foil. Without exception the wounds have healed absolutely *per primam*. Not a single stitch-abscess has been observed either during or subsequent to the healing of the wound. Such absolutely perfect healing of the hernia wounds we have not had heretofore, and he is convinced that the use of silver as a suture material has contributed somewhat to this result. The effect of silver on the growth of the more common pyogenic organisms has been tested. He states that he has two Petri plates which Dr. Bolton has kindly prepared for him. They have both been inoculated with *staphylococcus pyogenes aureus*. In the center of each plate is a piece of silver foil, such as is used in our wounds. Just outside, and completely surrounding the foil, is a perfectly clear zone several millimeters wide. Except for the clear zone and a slightly intensified zone just outside of this, the agar is quite uniformly clouded. The cloudiness is due to the growth of the micro-organisms with which the agar has been inoculated. Dr. Bolton has studied the effects of various metals on the growth of bacteria, and has recently read a most interesting paper on

is subject before the Association of American Physicians. With cadmium, zinc, and copper Dr. Bolton observed that the inhibitory action was greater than with silver. Prior to his knowledge of Dr. Bolton's experiments, Dr. Alsted tried to use copper and brass foil as a protective, and copper and brass wire for sutures; but these metals corroded the tissues so much that he soon stopped using them. We do not hesitate to employ buried sutures of silver wire in sewing tissues on the confines of an infected region. In cases of acute suppurative appendicitis, for example, we close the wound in the abdominal wall with deep, interrupted, buried sutures. These wounds are drained by a few strips of gauze. Two of the sutures are taken very close to this gauze, and sometimes must pass through tissues which are infected. Not even in such cases has a stitch-abscess ever occurred. Once a silver stitch and once a silver bone-plate, having been exposed to view and to the air by necrosis of the overlying tissues, were allowed to remain and to become embedded in the granulations of the wound, which healed by suppuration. Neither the stitch nor the plate at any time caused the slightest disturbance in the tissue or inconvenience to the patient. Much has already been observed in the use of silver wire that is worth recording, and enough to satisfy us that it will play a new and more important rôle in the surgery of the near future.—*Boston Medical and Surgical Journal*.

DANGER IN A PRICK FROM THE BLACKTHORN.—A. Reverdin (*Rev. éd. de la Suisse Romande*) holds that there is some foundation for the peasants' belief that a puncture of the skin by a blackthorn is more likely to be dangerous than other pricks. While resting in the shade he observed a butcher bird perched on a neighboring tree, from which it darted forth occasionally returning with some insect as its prey to devour it at its ease. After some time the bird, instead of coming back to the tree, flew with the insect it had just caught to a neighboring hedge, but then returned without it as if it had escaped, and caught a large cockchafer, which it carried likewise to the hedge, returning without it. Reverdin walked to the hedge, and there, on a blackthorn, found the bird's two last victims, impaled alive, trying to escape, but in vain. In fact, this bird uses the thorn as its larder. Doubtless the impaled insects are sometimes left to putrefy, and a prick with a thorn thus rendered septic may very likely give rise to a disagreeable phlegmon. [This habit of the shrike, or butcher bird, has long been known; it kills and impales many insects which it never eats, and in consequence will use a nail for the purpose if one be provided.]—*British Medical Journal*.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS will be held in Moscow from the 7th to the 14th of August, 1897. The following regulations have been published:

All those who desire to take part in the congress should communicate with the secretary general, and all communications and questions concern-

ing the different sections of the congress should be sent to the president of the committee of each section before January 1, 1897.

French will be the official language of the congress for all international business matters. In the general meetings other languages will be permitted, and communications and debates in the sections may be in French, German, English, and Russian.

The subjects to be considered are as follows: 1. *Anatomy*.—Anthropology, normal anatomy, embryology, and normal histology. 2. *Physiology*.—Medical chemistry. 3. *General pathology and pathological anatomy*. 4. *General therapeutics*.—Hydrotherapy, climatotherapy, etc. 5. *Pharmacology*. 6. *Pharmacognosy and pharmacy*. 7. *Internal diseases*. 8. *Pediatrics*. 9. *Mental and nervous diseases*. 10. *Dermatology and venereal diseases*. 11. *Surgery*. 12. *Odontology*. 13. *Military medicine*. 14. *Ophthalmology and otology*. 15. *Laryngology and rhinology*. 16. *Obstetrics and gynecology*. 17. *Hygiene*.—Sanitary statistics, social medicine, epidemiology, epizootology, and technical science. 18. *Legal medicine*.

VARIATIONS IN THE PULSE AND CARDIAC VOLUME WITH CORRESPONDING CHANGES IN THE SIZE OF THE LIVER AND SPLEEN.—M. Heitler (*Wiener med. Woch.*), in studying certain cases of arrhythmia cordis, found that when the pulse is small the cardiac dullness is larger than when the pulse is large. Recently he has discovered that with a small pulse and large area of cardiac dullness there is a corresponding increase in the hepatic and splenic areas of dullness. In cases of weakness during convalescence from acute infectious diseases the physiological variations in the cardiac volume, which Heitler first observed in 1890, may be increased. The rapid development and disappearance of passive congestion of the liver has been recognized. Sometimes the edge of the liver may be felt during the evening at the umbilical level, and the next day it may have receded below the costal margin. On one occasion Heitler was demonstrating a patient with mitral stenosis and enlargement of the liver from passive congestion, and while he was speaking one of his audience examined the patient, and said he could not find the hepatic enlargement. Heitler thereupon re-examined the patient, and discovered that the liver had already become smaller in size, and before he had finished the examination the organ had returned to its normal dimensions. The projection in the epigastrium had likewise disappeared. The whole change had taken place in about five minutes between the two examinations.—*British Medical Journal*.

A PENNY WISE AND POUND FOOLISH POLICY.—The Engineering Record of May 16th makes the following just comment upon a foolish

ordinary household filter, which affords no protection whatever against the bacillus of typhoid:

"An ordinance was introduced into the Philadelphia Common Council on May 7th directing the chief of the Water Bureau to examine all detachable filters and to select one to cost not more than \$1.50, having a capacity of twelve gallons an hour, and place one or more in each house using water from the city supply. The appropriation for this purpose was to be \$500,000. It is stated that this contemplates the provision by the city authorities of these faucet-filters to the poor people who are unable to supply themselves with large house filters. Such a scheme is a simple waste of money of the tax-payers and a delusion and a snare for the poor householder, who will assume that the authorities have provided him a filter effective for removing disease germs, when in fact he will get a simple strainer and nothing more. Philadelphia should spend its money on filtering its supply, and that with the least possible delay."—*Boston Medical and Surgical Journal*.

A RAPID METHOD OF AFFIXING PARAFFIN SECTIONS ON THE SLIDE.—S. H. Champlin, M. D., Physician Cook County Hospital, Chicago, Ill., writes to the Medical News: In teaching and working with a large class of medical students I hit upon the following method for rapidly affixing sections on the slide. A small drop of Mayer's albumin mixture is placed in the middle of a slide, and the section, from the microtome knife, laid on this drop. The drop forms a cushion and partially flattens the section. A piece of thin, smooth writing paper is then coated with albolene (liquid vasoline), and the oily side laid directly down on the section. With the ball of the thumb or finger firm pressure is made on the paper over the section; upon removing the paper the section will be found perfectly flat and firmly adherent to the slide. The slide is gently heated over a flame until the paraffin melts, and then it is placed in a jar of benzine or xylol to dissolve off the paraffin, when, after treatment with 95 per cent alcohol, it is ready to be stained in any way desired. The albumin is forced away from the immediate neighborhood of the section by the combined action of the pressure and melting of the paraffin. The pressure should be made *directly down* on the section, and may be exerted to any degree without injury to the most delicate section, if the thumb is not allowed to slip or twist. Care must be taken not to *rub* the paper as it lies upon the section, for in this way the section is often made to stick to the paper.

It will be seen that this method is very rapid as well as very simple; its results are all that can be desired in routine work, and it can be very readily grasped by the laboratory student.

THE June number of the Buffalo Medical Journal will be exclusively the product of medical women. Every detail will be placed in their hands, and it is needless to say that their best efforts will be in evidence when the next issue of this reliable periodical greets its readers.

Special Notices.

THE following letter, from Mavrogeny Pacha, Physician-in-Chief to his Majesty the Sultan, is but one of many to show the esteem in which distinguished physicians hold the well-known tonic wine "Vin Mariani":

"YILDIZ PALACE, CONSTANTINOPLE, July 2, 1895.

"Sworn enemy of the proprietary medicines which have of late years inundated all countries, and whose only object is the acquisition of gain for the proprietors without the least benefit to science nor to humanity, I make a single exception in favor of one preparation as meritorious, and which is thoroughly praiseworthy. I refer to Vin Mariani, which, without guise of deceit and mysticism, is valuable in its fortifying qualities, and has conferred high benefits upon weak and suffering humanity.

(Signed) MAVROGENY PACHA,

"Physician-in-Chief to His Majesty the Sultan

During the past thirty-five years "Vin Mariani" has gained more ardent admirers among the medical profession throughout the world than any other preparation, and justly so, as there has never been a disappointment from its use. This is especially noteworthy on account of the attacks made from time to time against Cocaine (generally from interested parties), and on investigation it is shown that the many so-called Coca wines are nothing more than shameful mixtures of cheapest, inferior wines, and variable solution of Cocaine unscrupulously sold as Coca wine, simply for mercenary purposes.

It is in this manner that really useful drugs are brought into discredit.

M. Mariani has gathered the written opinion, clinical notes, etc., of many thousands of physicians from all parts of the world, showing the universal high opinion of practitioners who have subjected "Vin Mariani" to thorough test.

CHRONIC INFLAMMATION OF THE URETHRA COMPLICATED BY OLD STRICTURE. Arthur Aulad, M. D., M. B., B. Ch., B. A. C., B. A., Rathmines, Defoe Road, Tooting, London, S. W., England, says: "I have very great pleasure in testifying to the extraordinary efficacy of Sanmetto. The only case in which I have used it was what I would call a test case, viz., one of inflammation of urethra of long standing, complicated by old stricture. I gave it in drachm doses three times a day, and in four days the patient was completely relieved."

If you want a chemically pure Cocaine Muriate, in handsome, large crystals, free from every impurity, the highest standard product—specify *Boehringer's*.

LABOR SAVING: The American Medical Publishers' Association is prepared to furnish carefully revised lists, set by the Mergenthaler Linotype Machine, as follows:

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These lists are furnished free of charge to members of the Association. Address: CHARLES WOOD FASSETT, Secretary, corner Sixth and Charles streets, St. Joseph, Missouri.

THE AMERICAN PRACTITIONER AND NEWS

"*NEC TENUI PENNÂ.*"

L. XXI. LOUISVILLE, KY., JUNE 27, 1896. No. 13.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

DISEASES OF THE ACCESSORY AND NASAL CAVITIES.*

BY J. A. STUCKY, M. D.

The existence of disease of the nasal accessory cavities is far more frequent than is generally supposed, and many of our "old catarrhal patients" have continued to suffer long after we have removed all visible obstructive and diseased tissue in the nasal and pharyngo-nasal cavities. I am confident that I have in more than one case overlooked suppurative and other pathological conditions in the accessory cavities of patients suffering with every symptom of catarrhal headaches. It is for the purpose of calling attention to the necessity of more careful examination and diagnosis, as well as treatment, in these cases that I have selected this subject for my paper.

I desire to present three classes of sinus disease with a brief report of a case illustrative of each class; the classification used is that suggested by Dr. R. C. Myles:†

1. Acute suppurative sinusitis with complete occlusion of the normal outlet.
2. Chronic suppurative sinusitis with moderately obstructive openings.
3. Myxomatous or polypoid degeneration.

After removing all internasal and pharyngo-nasal obstruction, if the patient does not speedily improve, I think we may safely expect to find

*Read at the June meeting of the Kentucky State Medical Society, 1896.

†"Diseases of Accessory Nasal Sinuses, etc.," R. C. Myles, *Medical News*, March 23, 1896.

some sinus trouble. The majority of cases of chronic catarrh, where there is very abundant secretion of mucus, and which is so persistent and difficult to relieve, I believe to be caused by congestion and thickening of the intracellular membrane.

As an aid to diagnosis of sinus obstruction and empyema nothing equals trans-illumination with the electric lamp. While the information imparted is not certain, it is enough so to justify you in making an "exploratory incision or puncture" with a small burr attached to a dental engine, small, sharp curette, or cutting forceps.

The lamp used is a four- or six-candle power, and when introduced into the mouth the face becomes lighted up to a degree that gives it the appearance of an old-time jack-o-lantern.* The non-appearance of light in the antrum or nasal cavity of the affected side indicates the presence of something in the antrum impermeable to light. As a rule this something is pus. The frontal sinuses are illuminated by using a small one-candle lamp, over which is drawn a piece of rubber tubing, which is allowed to project about one third of an inch beyond the lamp. The free end of this is placed under the orbital plate of the frontal bone near the inner canthus, the eye being kept closed. The light will fairly illuminate the frontal sinus. This method of examination requires an absolutely dark room to get the best results.

The views of Bosworth,† Zuckerkandt, Krause, and others are generally accepted, viz: That the disease in a great many cases is due to hypertrophic rhinitis, which results in an occlusion or stenosis of the osteum maxillary; this stenosis becomes an exciting cause of a catarrhal inflammation, which in time assumes a purulent type. Any thing that produces stenosis of the nasal cavity may result in an empyema of the accessory nasal cavities.

The methods of diagnosing these various troubles are so accurately given in our standard text-books that it is useless to describe them in detail in this connection. A short extract from Dr. Myles' excellent paper on this subject will not be out of place in refreshing our memory as to the anatomy of the parts, and assist us materially in making a diagnosis:

ward, beneath the anterior end of the middle turbinated body, where the tubal and gutter parts of the infundibulum unite, is the place where the muco-pus will appear when there is a chronic suppuration of the frontal sinus. Discharge from the most anterior ethmoidal cells will occasionally follow the latter course; the other anterior ethmoidal cells will discharge their secretions from the middle side of the bulla ethmoidalis, nearly one-fourth of an inch from any of the points where pus from the other three compartments is likely to find exit. The posterior ethmoidal cells drain through the superior meatus downward over the posterior part of the middle turbinate. The sphenoidal cells discharge their contents from an opening in the upper part of their anterior walls, very near the septum, and above the superior turbinated bodies. Since the openings of the antrum and the sphenoidal cells are in the upper part of their walls, it is necessary to hold the head downward in order to obtain the greatest flow. In suspected cases, where the diagnosis can not be made from an official discharge or other symptoms, or by trans-illumination, irrigation should be resorted to, either through the normal opening with the syringe and curved tube, or with the trocar and canula passed through the wall in the middle or anterior meatus, and in an extreme case through the canine fossa.

The same writer remarks (and I have found it true in the majority of instances): "In cases of chronic antrum empyema patients seldom complain of pain in the region of the superior maxillary bone, but when pain does exist it is referred to the supraorbital, temporal, or post-occipital region." This is a misleading symptom which it is well for us to catch. In chronic disease of the frontal sinus pain is always present, and increased by bending the head downward. In ethmoidal and sphenoidal disease a dull pain is usually located deeply beneath the bone through deep temporal and sphenoidal regions.

The following cases are cited to illustrate the types already referred to and the line of treatment followed:

CASE 1. *Acute Suppurative Sinusitis with Complete Occlusion of the Normal Outlet.* This case is one of frontal sinusitis (suppurative), and was referred to me by Dr. A. H. Witherspoon. I give his report to the time I was called to see the patient.

On December 13, 1895, I was called to Mrs. C., who was suffering from severe coryza. She complained of severe pain in the region of the frontal sinus, the pain being reflected principally over the right eye. The pain was described as being especially severe upon any sudden jar, such as would be caused by going down steps. For the next two or three days she had some elevation of temperature, the pain growing steadily worse. The usual coal-tar preparations were given in moderate doses,

along with salicylate of soda. On Saturday morning I was called in haste to see her. On arriving at the house I found her almost totally unconscious, with pulse rapid and thready. I at this time gave up my former diagnosis of neuralgia and began looking for more serious causes. A consultation was called, but no new diagnosis was made. The inhalation of compound tincture of benzoin with steam was suggested and tried. The pain gradually grew worse, morphine, hypodermically, was used, but the severe pain never entirely ceased. On the morning of the 15th I saw her again; she was still suffering. I then concluded that there was certainly trouble with the frontal sinus.

Late in the afternoon of the 15th of December I saw Mrs. C. with Dr. Witherspoon. Her countenance bore evidence of extreme pain. There was marked tenderness over the frontal region, especially the right side. Eyelids swollen and temperature 102.2° . An examination of the anterior nares revealed swollen myxomatous middle turbinate of the right side, with a general hypertrophic rhinitis of both sides. The turbinate was pressing against the septum, and the middle meatus was completely occluded. A ten-per-cent solution of cocaine was freely applied to the swollen turbinate, and the anterior process was resected or clipped off with cutting forceps. A probe was carefully introduced and the opening of the infundibulum was entered. This gave exit to a quantity of pus and the relief was almost instantaneous. The after-treatment consisted of frequent use of warm alkaline and antiseptic spray. Recovery was rapid and uninterrupted.

Resecting the turbinate in cases of this kind is far more satisfactory, and I believe more rational, than scarification or cautery of any kind.

CASE 2. *Chronic Suppurative Sinusitis with Moderately Obstructed Opening.* Miss O., aged thirty-nine, referred to me by Dr. David Barrow in September, 1885. She complained of constant weight and frequent pain in region of left antrum. All teeth had been removed from the upper jaw. She had consulted a general surgeon in Cincinnati, and had her jawbone operated upon for necrosed alveolar process. Had been treated by specialists in several cities for past five years. Examination showed marked post-nasal catarrh of left side, polypoid or myxomatous degeneration of middle turbinate. Anteriorly there was simple hypertrophic rhinitis of the right side. The nasal fossæ were large and patulous, covered with semi-purulent secretion. The semi-lunar opening of the left antrum was small and filled with pus. She dates all her trouble to a tooth which was extracted some ten years ago. The electric light

placed in her mouth showed dark umbra beneath the left eye. The illumination of the right side was normal. A diagnosis of empyema of the antrum was made and the anterior half of the turbinate was removed, and the opening in the antrum enlarged with a sharp curette. A quantity of foul pus was washed out daily for two weeks with partial relief of the symptoms. Finding it impossible to properly drain and treat the antrum through the natural opening, the alveolar operation was advised and readily consented to. On September the 29th, under ether, an opening was drilled with a dental engine through the alveolar process over the site of the second molar into the antrum. This opening was enlarged with a chisel until I could insert my little finger into the cavity, which was found studded with polypoid granulations. These were removed with the malleable curettes, the cavity irrigated and packed with iodoform gauze. The irrigation and packing with gauze in the antrum were continued daily for ten days, after which irrigation alone was used daily by the patient. She made a good recovery. To-day, nine months after the operation, she is reported as well.

I have had three cases similar to this, with trouble in only one antrum, and in no case did I get any satisfactory results until a counter-opening had been made in the antrum, in addition to removing a portion of the turbinate process. This case is typical as illustrating the inefficacy of treatment through a moderately obstructed or even an enlarged normal outlet.

CASE 3. *Polypoid Degeneration of the Sinuses.* Of this class of cases I have seen the largest number—ten cases in all—and I believe it is the most common of troubles in the nasal accessory cavities. I report briefly one case, my last, now under treatment, and the most complicated one I have had.

Mr. S., aged forty-nine years, had all her upper teeth extracted twenty years ago, and was treated at that time for suppuration of the left antrum. In 1886 I removed a large polyp from the middle meatus of each side. During the past twenty years she had been a sufferer of frequent dull headaches. In past four or five years these aches had become constant, and when she presented herself for treatment on first of April last she was the picture of despair. She complained of infra- and supra-orbital as well as persistent occipital headaches. She had loss of appetite with foul taste in her mouth every morning, and was greatly troubled with somnia. These troubles in addition to the various neurotic disturbances incident to her menopause make her life miserable. Post-rhino-

scopic examination showed a very pale pharyngeal vault and turbinates covered with yellow pus. Anterior rhinoscopic examination showed normal septum with polypi blocking both middle meati and pus oozing out between them and the turbinates, which had markedly undergone myxomatous or polypoid degeneration.

I removed the polypi with snare and forceps, also removed one half of each middle turbinate, and found the pus flowing from the ethmoid cells and the antrum on both sides. I clipped and curetted through the ethmoid cells into the frontal sinus, thoroughly curetted and irrigated. Polypoid masses were removed from the openings of both antra and the openings enlarged. The electric light still showed the antrum dark. An old root of the second molar was found in the right jaw: this I extracted, and entered the antrum through its socket. After enlarging this the antrum was thoroughly curetted. An opening was made through the canine fossa on the left side with dental drill and enlarged with chisel. Offensive granulations were removed. Both antra were thoroughly douched and packed with iodoform gauze. The same treatment with frequent spraying of the nose is continued twice a day. I still have the patient under observation at the hospital. The headaches have left; there is very little discharge from the nose or antra, and this is not offensive or purulent in character. She sleeps and eats better, and every thing looks favorable for a good recovery. I feel confident that in this case I entered the sphenoidal sinus through the left nostril, but am not certain enough of it to place it on record.

In the management of empyema, or any obstructive disease of the accessory nasal cavities, the first and most important step is in making a correct diagnosis. My experience in cases of this kind leads to the following conclusions:

1. Remove all intranasal obstruction before operating upon the sinuses, unless it be in the acute suppurative cases.
2. Resection of turbinate is better than use of cautery, caustics, or scarification.
3. *Establish and maintain free and thorough drainage.*
4. Gauze drainage is superior to metal or rubber tubes.
5. Equal parts of neutral saline and saturated boracic-acid solutions, with forty grains acid carbolio to the pint, make the best solution for patients to use for daily washing.

LEXINGTON, KY.

CHARACTER OF THE PRESENT PREVALENCE OF SCARLET FEVER IN LOUISVILLE.*

BY JOHN A. LARRABEE, M. D.

Professor of Obstetrics and Diseases of Children, Hospital College of Medicine.

Scarlet fever is pre-eminently a disease of childhood, and, while age does not insure immunity, there is a marked decrease as we approach adolescence. Every few years it assumes an epidemic form, but it is, I believe, never entirely absent from large cities and populous communities. In all probability fresh outbreaks are from cases, the micro-organism being thus kept alive in human beings. Its history for upward of two hundred years, the period in which it has been known, is peculiarly interesting. None of the exanthemata is subject to such variations. Thus the description given by Sydenham of the first great London epidemic, contrary to what should be expected, was that of a light and trivial disease, only dangerous by the officiousness of the doctors: "*Vix noven morbi merebatur.*" And it was he who first differentiated scarlet fever from measles, an older and more prevalent disease. This is certainly a strange contrast with the observations of more recent periods both in Europe and America. Its prevalence in the eighteenth and nineteenth centuries warrants the conclusion that it has steadily increased in potency until it has come to be considered one of the most treacherous as well as fatal diseases of childhood. Löschner fifty years ago wrote that he had never seen a benign epidemic. Thirteen per cent of all cases became dropsical, and thirty eight per cent of all dropsical cases died. Epidemics of scarlet fever vary not only in severity but also in complications. Some have been largely anginose, others noted for rheumatic complications. The mortality has ranged from thirteen to forty per cent and then again as low as three to four per cent. Köstlen wrote that scarlet fever disappeared entirely from his practice for fifteen years, and that there was not a case in Stuttgart from 1830 to 1846, at which time an epidemic occurred in which there were no fatal cases. Those who have had experience with the present prevalence of scarlet fever will, I think, agree with me that in point of severity cases are in strange contrast with those which we have been accustomed to see in former epidemics. The word epidemic is not strictly proper to apply to the present prevalence as to the number of

* Read at the June meeting of the Kentucky State Medical Society, 1896. For discussion see p. 495.

cases, and still the disease is so widespread as to be out of consideration as an endemic. If epidemic, it must certainly be considered benign.

In these mild cases, however, even where there has been but little temperature, desquamation ranging from branny scales to exfoliation of skin has been present. The usual sequela—anasarca—has not been wanting. The initial symptoms have been extremely mild; vomiting and convulsions have been noticeably absent. Tonsillar exudates and diphtheria also absent. I desire to state, *en passant*, that I do not consider that the exudate which so frequently occurs upon the tonsils and fauces, and which under ocular inspection so closely resembles false membrane, is diphtheria. Of course a more crucial test than observation should be made in such cases. If diphtheria is prevailing at the time in the community the condition of the scarlatinal throat is exceedingly favorable to the reception and development of the bacillus, which, however, must be implanted from without, and can not originate from the scarlatina germ. When diphtheria complicates scarlet fever the attendant prodromes, as rachialgia, cephalalgia, and myalgia, if present, are overlooked. The character of the deposit affords the only reliable test. Surgical operations, amputations, and so forth, done in an atmosphere of scarlet fever are followed at once by the rash and sequelæ without the prodromal symptoms. The complications of a serious nature which may arise in the course of scarlet fever are mostly in line with the serous membranes, and here we have a distinct difference in the elective affinity of two poisons, viz., scarlet fever and measles—the latter showing as decided a tendency to the involvement of the mucous membranes. The recognition of this fact is of great importance and leads us to anticipate their occurrence. Thus in scarlet fever, looking in the line of probabilities, we would watch more assiduously the joints, peri- and endo-cardium, the pleura, peritoneum, and brain, while in measles this same assiduity should be given to the larynx, bronchial tubes, lungs, and the intestinal tract.

There is, however, one complication arising from invasion of the mucous surfaces by continuity of structure which is annoying to the practitioner and highly dangerous to the patient, comprising the integrity and usefulness of one of the most important of the special senses, and that is inflammation and suppuration of the middle ear. Specialists from observation and experience are sufficiently impressed with the importance of this complication and the urgency of its symptoms. I do not believe, however, that the general practitioner so fully appre-

iates the present and future dangers of middle ear infection in the course of scarlet fever. Now it is impossible that any large proportion of such cases will fall to the lot of the specialist, while they will all come under the observation of the practitioner. Statistics show that five per cent of all cases of adult deafness may be traced to scarlet fever. It is for this reason and because I believe that this complication is largely preventable that I allude to it in the presence of those who are better qualified than I to treat it. I believe that the affection of the nasal pharynx even in mild cases of scarlet fever is sufficient to produce most serious and chronic lesions.

I therefore begin the treatment before the symptoms of ear trouble are manifested. In all cases, mild, severe, or anomalous, the throat, nose, and fauces should be frequently cleansed by gargles, douches, and syringing with hot water, boric acid, and saline solutions of a non-irritating character. The peroxide of hydrogen, unless there be faucial or tonsillar deposits, is too severe an application. Listerine, Pasteurine, and boro-lyptol, with the addition of salt and hot water, complete my armamentarium. Boro-glycerides are not good applications to mucous surfaces. Inflation of the eustachian tube at each visit is of advantage. In scarlet fever the opposite obtains in regard to purgatives that applies in measles. Purgation with salines or compound licorice powder greatly limits complications, while in measles such a course would be highly rejudicial.

Since I have employed gentle purgatives and fruit laxatives I have greatly reduced both complications and sequelæ. The treatment of scarlet fever should be that of a disease of limitation, and so far as possible without medication; by this I do not mean that indications which arise should not be promptly met, but I desire to emphasize that unless they do present the disease is best managed by cooling, acidulated drinks made from pine-apple or lemons or oranges, abundance of water, restriction of all nitrogenous food, and perfect personal and general hygiene, including the before mentioned treatment of the throat, from which part I believe that septic infection arises.

Rheumatic complications have been rare, and consequently endo- and peri-cardial involvement less frequent. So far as any conclusion can be drawn from this experience, it would seem to establish the relation between a severe exanthem involving the entire cutis and rheumatism. The rheumatism of scarlet fever usually manifests itself at the period of the decline or about the fifth day of the eruption, and from a clinical

and therapeutical standpoint is a true rheumatism, and relieved by the treatment usually employed in acute polyarthritis; moreover, it has the same tendency to cardiac complications. The question as to its etiology has not been satisfactorily settled. I am inclined to think that it has the same cause, viz., muscular metabolism from arrested secretions, and that it is not especially related to the specific or microbic poison of scarlet fever. It has been shown that in acute rheumatism or in any rheumatic condition the blood is not essentially altered as to lactic or uric acid, which is also true of scarlet fever.

The after-coming kidney troubles announced by anuria and albuminuria, as usual, appear to be in inverse proportion to the exanthem. At least, if not so, it certainly is a matter of observation that cases so mild as to escape diagnosis have been followed by most severe glomerulonephritis, and some have proven fatal. The complication is most common under five years of age. In one case which terminated fatally, through pulmonary edema and pericardial effusion, no diagnosis of scarlet fever had been made by the attending physician. Some of the cases of albuminuria and anasarca brought to the clinic gave no history of scarlatina until interrogated. The points which I desire to present for your discussion are as follows:

1. The mild character of the cases.
2. The probability of immunity being secured by such cases.
3. Frequency of middle ear troubles.
4. Rheumatic complications.
5. Anginose complications.
6. Frequency and treatment of kidney complications.
7. The absence of hyperpyrexia.

LOUISVILLE.

**A CASE OF STRANGULATED CECAL HERNIA, WITH A PIN IN
THE APPENDIX.***

BY W. O. ROBERTS, M. D.

Professor of Surgery in the University of Louisville.

At ten o'clock A. M., July 30, 1895, I saw, with Dr. William Carter, a case of strangulated inguinal hernia which presented the following history:

The patient was a baby boy, a year and three weeks old. Although bottle-fed from birth, he had always been robust and healthy; never having had a moment's illness until the morning preceding my visit. At that time he was attacked with what his mother supposed was summer complaint. During the day he had vomited several times, and had had some ten or twelve actions from the bowels. The first two were large and watery, while the others were small and composed of mucus and blood. These latter were attended with great pain and straining. The last action had occurred at six o'clock P. M.; but the vomiting continued up to the time when I saw him.

Just after the last action the mother noticed a tumor at the right side of the scrotum, and having had experience with an older child, who was the subject of congenital inguinal hernia, she attempted to reduce it. This attempt, while giving the child great pain, was unsuccessful. The child continued to suffer through the night, Dr. Carter not being called until a hour before my visit.

I found the patient in bed. He was crying, and the facial expression indicated pain. The lower limbs were flexed. The abdominal muscles were rigid. There was a tumor in the right side of the scrotum about the size of a hen's egg. The mother stated that it was then twice as large as when she first saw it. It was exceedingly sensitive to pressure. The dartos of the scrotum was edematous. The pulse was 140, the temperature (axillary) 101° F. We advised immediate herniotomy.

With the assistance of Drs. Carter and Cuthbert Thompson the patient was put on the table, chloroformed, and the operation begun. No effort at taxis was made because of the boggy condition of the scrotum. When the sac was reached it was much thickened and found to contain very little fluid. This proved to be of a reddish color; the cecum with the appendix vermiformis composed the contents. These

* Read at the June meeting of the Kentucky State Medical Society, 1896.

were very deeply congested. On lifting up the appendix, to my great surprise I discovered a pin protruding from its posterior wall, as seen in the accompanying photograph, which was taken soon after the operation. It had passed through the sac into the dartos of the scrotum. The head of the pin was in the end of the appendix. After overcoming the constriction, which was at the external abdominal ring, the appendix was removed, and the cecum was returned into the cavity. There were no adhesions. The sac, which was a complete one, was removed, and the external abdominal ring sutured. Recovery took place without an untoward symptom.



Right inguinal herniæ whose contents are cecum and appendix are not so rare; but this condition of things, complicated by a pin in the appendix, I had never before heard of, much less encountered. My case seems to be unique. Pins as foreign bodies in the appendix I had also regarded as very rare until a day or two after the operation, when the *Annals of Surgery* for August, 1895, brought to my view the following item from the proceedings of the New York Surgical Society, stated meeting, April 10, 1895.

Dr. F. Kammerer presented a specimen from a case of appendicitis, caused by the presence of a pin. The patient was a boy of seven years, who gave no history of previous attacks. He had been ill for almost a

of the appendix was firmly embedded in the mass, and further, that an ordinary pinhead had passed through almost the entire length of the appendix and had escaped through a perforation at the tip of the latter. There were very firm adhesions of the appendix to the omentum, showing that this could not have been the first attack. The cases in which a pin had entered the appendix and caused trouble were not so rare as the speaker had at first believed, Drs. Markoe and McBurney having each presented one to this society, and only a few weeks ago two additional cases were reported in the Medical Record. It was the first foreign body the speaker had ever found in quite a number of extirpations.

Dr. Abbe said he had also had a case of pin found in the appendix which he had not reported to the society. The pin was crusted with calcareous matter. It was the only case of appendicitis in which he had found a foreign body other than fecal concretions.

LOUISVILLE.

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, April 31, 1896, Dr. W. L. Rodman, President, in the chair.

Exhibition of Pathological Specimens. Dr. W. L. Rodman: This interesting specimen was removed from a man about forty-five years of age, who gave a history of gonorrhea seven years ago, which involved the epididymis, and which seemed to get well in the usual time. For the last year or eighteen months he has had enlargement of the testicle. Examination was not satisfactory, but I thought it to be tuberculosis of the epididymis. He had albumin and pus in the urine. Not being able to locate a lesion at any other point in the genito-urinary tract, I came to the conclusion that there was an abscess in the epididymis which discharged itself occasionally into the urethra. I removed the testicle and found my diagnosis to be correct. He undoubtedly had tubercular disease of the epididymis, and engrafted upon this was a secondary infection by pyogenic cocci. You can squeeze the vas deferens to-day and a drop of pus will exude.

This is a pedunculated subperitoneal fibroma which was removed from the uterus of a woman about thirty-two years of age, the operation having been done a week ago to-day. After cutting down upon the

tumor (which was at least three times larger than now) I encountered the pedicle which was about the shape and size of my wrist. I controlled the hemorrhage with the elastic ligature, transfixed the pedicle, enucleated and stitched the peritoneum around. The woman has made a perfect recovery. The appendages were perfectly healthy.

Dr. L. S. McMurtry: In regard to the last case that Dr. Rodman reported, the specimen is very interesting, and I wish to congratulate him upon the manner in which he conducted the operation, as well as the result. I think that, as our knowledge of these tumors increases, the operation which the doctor has done here will be more common than it has been. In young women with healthy appendages it is better to preserve the appendages, if possible. The cases must be selected, however, for this operation, and the number is necessarily limited for the reason that fibromata are usually multiple, the uterus is usually fibroid, and the appendages are often involved.

Dr. A. M. Cartledge: Bearing upon the first case, I saw a patient this afternoon affected like the one I reported to the Society some time ago (which proved to be tuberculosis beginning in the epididymis), with the exception that it suppurated and opened externally. It is very difficult to say whether the tuberculosis is primary or secondary. In last October he received a blow on the right testicle; swelling followed, suppuration finally took place, and the pus escaped externally. He was seen by a careful surgeon, who curetted and packed the sinus. The entire epididymis is now involved, and the cord is nodular, and he has the tubercular appearance. Whether he had primary infection following trauma, and pyogenic infection took place after opening externally, is difficult to state at the present time. I agree with Dr. Rodman that tuberculosis begins primarily in the epididymis. As a rule the disease lingers a long time in this part before attacking the testicle itself.

There is one little criticism I feel like making upon the operation in the second case, and that is ligation of the pedicle. It is questionable whether the pedicle does not represent tissue from which the tumor may be regenerated.

Dr. Rodman: The pedicle which was left was practically a part of the uterine tissue itself.

The essay was read by Dr. John A. Larrabee; subject, Character of the Present Prevalence of Scarlet Fever in Louisville. [See page 487.]

Discussion. Dr. Wm. Bailey: I am always interested in a subject of this kind, especially in a paper from Dr. Larrabee. He made so fair presentation of the subject that he leaves us little to say. The present epidemic is exceedingly mild; why so I am unable to say. I believe these mild cases give as much immunity as the severe. It has been my privilege to see two cases in persons over thirty-five years of age, one of which, a woman aged thirty-seven years, died. Ten years ago her eldest child had a severe attack of scarlet fever followed by the most complete desquamation I have ever seen. The mother slept on the bed beside her child. The younger sister, two years old, was frequently on the bed. Two years later the younger sister contracted the disease, the mother followed, and died. I believe kidney complications are more common in mild than in severe cases, because we do not take as much care of the mild as of the severe cases. Hence, I believe all cases should be carefully looked after for at least a month. The cases are so exceedingly mild in this epidemic that I am not particular to insist upon isolation, not caring whether the other children get it or not. What was said in regard to ear complication is true. We ought to look after and endeavor to prevent this complication without doing injury in the treatment to the membrane of the nose and mouth. The subject of middle ear troubles was up in this Society recently and fully discussed.

Dr. F. C. Simpson: I listened with a great deal of interest to Dr. Larrabee's paper. I have not seen a great deal of scarlet fever during the present epidemic, but all that I have seen has been mild, and without ear or kidney complications. I have allowed the patient to remain out of bed nearly all the time. The highest temperature in any of the cases was 102°. My experience has been that kidney complications are more frequent in children between the ages of eight and ten years than at any other age. I have not had the children isolated, thinking, with Dr. Bailey, that this is a very good chance for the unprotected children to have the disease.

Dr. J. M. Ray: Dr. Larrabee referred to one of the complications of scarlet fever that we, as ear specialists, are frequently called upon to treat. Recently the Society had up for discussion the subject of middle ear disease, and the subject of ear troubles following scarlet fever was then referred to. There is no doubt a peculiar tendency in the ear disease of scarlet fever to become chronic; the explanation of it I do not know; but certainly seventy-five per cent—and in children a higher

percentage of chronic suppurative ear troubles are due to scarlet fever. This form of ear disease is nearly always suppurative; in fact I do not know that I have seen in my personal experience any other form. I have not been called to the cases in the beginning of the scarlatinal attack very often, but I can call to mind a number of cases in which I from the beginning attended them, yet they have become chronic. It seems to me that the most important point in the ear troubles of scarlet fever is prophylaxis. There is always a large amount of infiltration about the tonsils and pillars of the fauces and exudation that is liable to be transferred along the eustachian tube and involve the middle ear. The method to be instituted is to keep the throat clear of accumulated secretions that it is possible to remove by washing with mild antiseptic and detergent solutions.

Dr. Turner Anderson: I have recently had a case of midwifery that gave me some concern on account of the prevalence of scarlet fever in the family. After the labor was over I was asked to see the patient's little boy who had a sore throat, and had been complaining generally. I found the body covered with a scarlatinal eruption. This is not a new experience in practice. I have never seen a lying-in woman contract scarlet fever or suffer in any way that could be directly traced to scarlet fever in the house. Dr. Larrabee calls attention to the fact that where surgical procedures are resorted to the disease may appear without any of the ordinary initial symptoms. Certainly a lying-in woman would be peculiarly susceptible, but I have never seen a case of scarlet fever directly traceable to the presence of the disease in the house in which the woman was confined.

Dr. W. O. Roberts: A short time ago I operated upon a little boy, six years of age, for stone, doing a lateral perineal lithotomy. On the second day after the operation his temperature ran up to 103° , and the next morning he was broken out with scarlet fever, having the most severe attack I have seen this year. He got well without any trouble. There had been scarlet fever in the neighborhood, but none in the house. There were no unfavorable complications in the wound.

Dr. John G. Cecil: I always enjoy Dr. Larrabee's papers, and the one presented this evening is no exception. My experience in the recent epidemic has been so slight that I hardly feel competent to speak to the question at all. My experience in obstetrical work with scarlet fever in the house has been similar to Dr. Anderson's. Not long ago a case of severe scarlet fever occurred in the house of a lady whom I had

delivered two days previously. I kept the child in a separate room, and the lying-in woman had no trouble, neither had the new-born child. On three occasions scarlet fever has appeared in the Masonic Home, and on each occasion has been confined to one or two cases, so that I do not believe that it is a highly contagious disease. Another feature of Dr. Larrabee's paper that interested me was his remarks on the rheumatic form of scarlet fever. I believe the rheumatism which he speaks of as true rheumatism following scarlet fever is more like a gonorrheal rheumatism, so called. I believe that that form of arthritis which follows scarlet fever is due to a mixed infection. The tendency is rather to suppuration. Suppuration seldom takes place in acute rheumatism. I am inclined to believe, therefore, that the arthritis which is common in scarlet fever is quite distinct from acute articular rheumatism and that it is due to a mixed infection.

Dr. H. A. Cottell: I was certainly entertained and considerably instructed by Dr. Larrabee's paper, but the most prominent feature of the present epidemic was not mentioned by the essayist or by any one who has spoken upon scarlet fever to-night—I refer to the green placards. I was glad to hear Dr. Cecil throw a doubt upon the contagiousness of scarlet fever. I do not believe that it is a contagious disease in the sense that measles, smallpox, syphilis, or any really contagious disease is contagious—that is, transmissible by personal contact. It is the exception and not the rule to see more than one case of scarlet fever develop in the same family. It is an infectious disease, and the culture medium of the microbe (if you believe it is a microbe) is not understood. I believe you can have a case of this disease in a house, and, leaving the house unfumigated, if another family moves into it years after the children may take scarlet fever. I do not think it is important to mark the places where scarlet fever exists, because I do not believe people going to or coming from the house will catch the disease. Placarding is a scarecrow and is sometimes persecution. I had a case in a child on First Street in the winter, which from the prodromic symptoms I feared would be scarlet fever; it even went so far as to develop a scarlatiniform eruption which quickly disappeared, and pneumonia developed. I came very near doing the father, whose family lived in rooms behind his shop, a serious injustice by placarding his house for scarlet fever.

I have seen a number of cases of kidney complication of scarlet fever in my practice, but none in the present epidemic. They often present

symptoms which seem very serious, but are quite amenable to treatment. As for endocardial and pericardial complications, I have had the good fortune never to encounter them.

Dr. Cartledge: The most interesting feature of scarlet fever relates to the mildness of the disease at the present time. In 1876 an epidemic of scarlet fever passed over the State which was very fatal. Since that time scarlet fever in Louisville has steadily diminished in virulence. Unfortunately we have almost no information as to the essential cause of scarlet fever. It has occurred to me that the most plausible explanation of this decreasing virulence is that people are being gradually immunized to the disease. There seems to be abundant evidence that such a process does take place. At a recent meeting of this Society Dr. Marvin referred to the gradually lessening severity of typhoid fever. There are many other instances of this kind. Take, for instance, the Texas cattle fever. In parts of this country where Texas fever constantly is present the cattle have become immune to it; but when the disease affects cattle outside that region it is very fatal, as it was no doubt when originally introduced into Texas and other Southern States.

Dr. F. C. Wilson: I can not agree that scarlet fever is not contagious. I have seen instances in this epidemic in which children allowed to remain in the room with affected children did not contract the disease, but this has not been a common experience with me. Certainly the disease can be conveyed to a great distance, the poison remaining virulent for a long time in clothing, etc. I have known instances where the poison has remained virulent for years in clothing packed away, and it seems to me nothing would prove the contagiousness of the disease more than this. We can hardly say that the poison went through any process of propagation during all this time, but that it simply remained quiescent, and whenever an opportunity afforded it set up disease in persons susceptible. There is one point I had hoped to hear discussed freely—the kidney complications. As the result of exposure, particularly during the time the skin is left unprotected, it is particularly liable to be affected by any exposure and the checking of elimination by the skin increases the labor of the kidney, bringing about congestion and possibly inflammation. The agent which I have found of greatest use is gallic acid. It is eliminated through the kidney, and its astringent action controls the congestion, and it acts in that way as a diuretic. The administration of the various forms of iron, and sometimes of arsenic, may be of service.

The health officer told me that there were thirty-five cases of scarlet fever in the city at one time, and that there had not been a death in three months. Probably there were in the city during the three months one hundred and eighty cases without a single death.

Dr. Larrabee (closing the discussion): The last point made would be the first I would take up: in regard to the variations in the epidemic itself and the character of cases in different epidemics. We should expect, if the theory of Dr. Cartledge prevailed, that we should have the first epidemic prevailing very severely. Such was the case with measles in the Phillipine Islands several years ago. In scarlet fever we have a disease in which the first epidemic known was as mild as at present. A point that has not been discussed sufficiently was the proportion of complications in different epidemics. It was my privilege to see the epidemic of 1876. I saw in my own practice thirteen deaths. In two cases the temperature ran up to 110° F. before the eruption appeared, the other case being typical scarlet fever. In regard to middle ear troubles, the point I insist upon is that cleansing the throat should be made a routine practice whether the throat is sore or not and in all cases of the disease however mild. In regard to the point of contagiousness the remarks have been surprising. Negatives never prove any thing. The fact that a child does not contract the disease when exposed does not prove any thing; but a child getting the disease when exposed proves the whole question. I have always looked upon scarlet fever as the highest and most persistent type of contagion with which we have to deal. In regard to the rheumatic complications of the disease and the discussion upon that point, I desire to be understood that this is a true rheumatism and that the conditions of metabolism are as perfect to produce it as could be. The rheumatism complicating scarlet fever yields at once to salicylates, which of course we all employ. The bearing of the paper, as I intended it, was upon the present prevalence, and I am especially obliged to Dr. Cartledge for giving the discussion the trend he did.

In regard to the action of gallic acid, it does for the kidney just what we would do if we had the organ in our hand. The especial action is of approximation of the tissues, squeezing out the offending material. I have seen two bad cases of kidney complications in the present outbreak. These were cases that were not diagnosed, but were allowed to go out upon the street without any restrictions upon them until they showed puffiness about the face. I have not seen a case with

a temperature above 102°. We have been taught that even in the mildest cases we have a sudden precipitation of high temperature. The vomiting and other symptoms which initiate the disease have been absent, but at the same time there can be no doubt about the diagnosis.

Dr. Cottell: I merely wish to put on record the fact that I delivered yesterday a woman of a child who was herself in the third day of the eruption of measles. I particularly wanted to ask as to the probable outcome of this case, in view of the liability of mucous membranes to inflammation in measles.

Dr. C. Skinner: About nine years ago I delivered a woman broken out with measles. The child also had the eruption on its body when born.

Dr. Larrabee: We would not expect a metritis from the measles. It would be interesting to watch the infant and to see if it has measles. I succeeded in carrying a woman, in 1873, through smallpox with a seven months' fetus. Several times I was called to see her while having uterine pains, but by the use of opium they were stopped, and I delivered her of a child at full term, which I have several times attempted to vaccinate without success.

JOHN L. HOWARD, M. D., *Secretary.*

Abstracts and Selections.

SOME UNUSUAL FORMS OF BROMIC INTOXICATION.—At the eleventh annual meeting of the Association of American Physicians Dr. Weir Mitchell read a paper on this subject. It has long been recognized that the bromides may increase the unpleasant after-effects of epileptic attacks, especially the irritability of temper. This will in some cases be accompanied by ptosis and feebleness of the limbs, not rarely more marked upon one side than upon the other—just like some drunkards who can recognize that they are distinctly “drunker in one leg than in the other—feebleness and dullness so marked at times as to amount to partial imbecility. This was the condition in a girl of seventeen, whose father, an apothecary, on the principle “if a little helps much will cure,” had been giving her 150 grains of potassium

the left leg being worse than the right. In many cases he had seen melancholia and mental depression, even to suicidal degree produced by continued use of the drug. In one singular case a doctor's wife, who had been mildly melancholic for years, on approaching the menopause began to be troubled with marked suicidal tendencies at her menstrual periods. These she confided to her husband, and he brought her to Dr. Mitchell, when, after much questioning, she confessed, for the first time, that ever since a furious attack of sciatica, years ago, she had been taking sixty grains of mixed bromides daily, "for fear the pain would come back." She was advised to stop this practice at once, and to her surprise her next period passed without any unpleasant symptoms, and in a few weeks she was rid of her melancholia entirely. A year later, in the course of a neuralgic attack, she was given ninety grains of bromide by an attendant, with the result that her melancholia returned and lasted until the effects of the dose had passed off. In other epileptic cases the drug would increase irritability of temper to the verge of homicidal tendencies.

Some years ago a young farmer was brought in by his friends with this sort of a history. Dr. Mitchell was then utterly skeptical as to the possibility of such an effect and, in spite of the great reluctance of the patient's family, insisted on putting him upon the usual bromide treatment. The experiment at the end of three days came most perilously near resulting in a tragic homicide, and the doctor was fully convinced without further trial. In two instances young boys were reported by their parents as "ugly" and unmanageable whenever they were taking the bromide, though at other times good-tempered and obedient.

The drug also produced marked maniacal excitement, which rapidly passed away on its stoppage.

Dr. Janeway wished to add to this interesting paper three cases of his own of fatal poisoning, with imbecile symptoms, by bromides given for epilepsy in doses of three drams, six drams, and one ounce *per diem* respectively. The coroners of New York had also reported two other similar cases to him. He had several times known the excessive use of "bromo-soda" by alcoholics—an altogether too common and dangerous remedy, by the way, in "sobering up"—followed by symptoms strongly suggesting general paralysis. In one case six bottles a day were taken. He was sure that many cases of mental depression in convalescence from typhoid were caused by the bromide given for restlessness.

Dr. Hare raised the old historical question, whether the evil effects of bromide were not really due to the potash element, which is in itself a dangerous depressant. Even the citrate of potash in large doses had been known to cause collapse. Personally he would prefer the bromide of soda as safer.

In the use of "bromo-cafein" or "bromo-soda," might not the caffein be partly responsible? He had seen large doses of the latter alone, given for heart disease, produce acute mania.

Dr. Lyman remarked that his experience verified the paper, but questioned whether heredity and the presence of the arthritic diathesis might not contribute largely to the production of irritability and mania. Has avoided the potash salts for years.

Dr. Thomson added three corroborative cases, two of which were epileptics. One of these suddenly left home without warning and went on a visit of several days to mere acquaintances, entirely uninvited, while taking bromides. The other, a young lady, deliberately bade her mother good-bye upon the street and ran away from her. Both recovered on stopping the drug.

Dr. Dana thought that the cry about the poisonous effects of potassium was an exploded bugaboo, or at all events he was very skeptical as to its basis. In a large experience with both, he had been unable to detect any difference in effect between the sodium and potassium salts. Had seen huge doses of the potash salts given without any serious effects whatever, and thought the chief danger was from the bromine alone. Had seen just as severe toxic results from sodium bromide as from potassium bromide. In small doses the effect of the bromides is soothing and cheering, and the only danger is from most unnecessarily large doses employed. In his experience three to five grain doses will produce as marked results in most cases as twenty or thirty grains.

Dr. Mitchell, in closing the discussion, expressed his thanks for the valuable additional contributions to the knowledge of this subject. Personally he had never seen any more depressing effects from the potassium than from the sodium or lithium bromides. He commonly used the latter as being more soluble, and this had been the form in several of the cases reported in his paper. He urged that the bromides should be used more sparingly. They seemed to be regarded as the inevitable therapeutic necessity in nearly all nervous affections, and he comparatively seldom saw a case in consultation in which bromides had not been administered by some one.—*Medical News.*

THE DUCTLESS GLANDS.—At the recent meeting of the American Medical Association Dr. J. B. Marvin, of Louisville, read a paper on this subject. Ductless glands, vascular glands, or glands with internal secretion, as Dr. Marvin prefers to call them, are now attracting much attention in pathology. Some have a twofold function like the liver, in which there is an external secretion of bile as well as an internal secretion, which is equal if not greater in its importance. External secretions are not the most important function of the pancreas. This gland histologically is made up of not only glandular tissue, ducts, etc., but there are scattered through it peculiar masses of epithelial-like tissue of great vascularity, and this very feature seems to be the clew to follow in the study of the function of these glands generally. If a portion of the pancreas, even of another animal, be grafted into the peritoneal cavity or under the skin,

the removal of the entire pancreas will not be followed by the usual symptoms. If the grafted pancreas be removed, then diabetes and death quickly follow. If the grafted pancreas has had its secreting power destroyed by having paraffin injected into its ducts, it will still prevent the occurrence of diabetes.

These facts are very suggestive. It would seem that these highly vascular interstitial islets of the gland are important structures which furnish something to the blood which prevents the undue formation of sugar in the blood and in the urine. This internal secretion profoundly modifies the carbo-hydrate metabolism of the tissues.

Passing to ductless glands without external secretion, viz., the suprarenals, thyroid, and the so-called pituitary gland (hypophysis), which are allied histologically and pathologically, we have an internal secretion which, when poured into the blood, profoundly affects nutrition. In pathologic conditions they are alike in one respect, they all show nutritional changes in the skin. Associated with abnormal variations in the secretory functions of the adrenals, Addison's disease occurs; the thyroid hypersecretion results in exophthalmic goitre, diminished secretion in myxedema and cretinism, while acromegaly is in some way related to disease of the pituitary gland. It is further suggested that the Hippocratic fingers and other nutritional changes in the integument and osseous tissues developing in the latter stages of pulmonary phthisis may be due to interrupted function in the bronchial glands.

A METHOD OF CURING TIC DOULOUREUX.—After a vivid description of this agonizing affection, in which every thing that the wit of man could suggest, from bromides to surgery, had been used as a remedy, but without permanent or reliable results, he proceeded to describe a method of treatment which had proved very satisfactory in his hands. This consists of three parts: (1) Massive doses of strychnia hypodermically; (2) tonics; (3) rest in bed, with a nearly liquid diet, and large amounts of diluent drinks. The strychnia he begins at one thirtieth grain and rapidly increases up to one-sixth to one fourth grain *per diem*, until slight toxic symptoms are produced. He was surprised to find a markedly anodyne effect from these large doses, and often a somewhat somnolent condition, with a stronger, slower pulse. Illustrative pulse-tracings from some of his cases were shown. The relief of pain following the injections was in some cases so marked that patients would return later in the day begging to have them repeated. A curious fact was that painful mesenteric spasm was no contra-indication to the drug, but was promptly relieved by it. The tonics consisted of heavy doses of potassium iodide and iron. The rest in bed was one of the most important parts of the treatment, and was insisted upon in all severe or obstinate cases. It must be all day long for four weeks, then half the day for two weeks more. A second course of the treatment was sometimes needed, but in no case yet had marked benefit failed to result. The

relief from the pain had lasted in his cases from two to five years, the latter being the period during which he had been using the treatment. He regarded the disease as essentially a local expression of general malnutrition with arterial sclerosis. Surgical interference was regarded as a clumsy cutting of the Gordian knot, and justifiable only as a last resort.—*Dr. C. L. Dana, Association of American Physicians.*

SERUM-THERAPY OF TUBERCULOSIS.—Renzi (*Rif. Med.*) gives an account of a series of cases treated by injection of Maragliano's serum. In three patients, whose condition was rather serious, 10 c.cm. were injected at one time, and repeated at intervals of three to eight days for twice or three times. In all of these when so treated by the larger dosage the injection was well borne, and no local bad effect followed with the exception of slight tumefaction on one occasion. In all of these there was increase of appetite and a certain sense of well-being, so that it was possible to increase the daily amount of food. In twenty-two instances the weight increased in twelve, remained stationary in one, diminished in nine. Inspiratory force increased in fourteen, remained stationary in eight. The temperature increased in ten, remained stationary in two, diminished in ten. The amount of sputum and the quantity of bacilli diminished in ten and thirteen respectively, being stationary in the rest. In all instances the moist sounds gradually diminished, disappearing in two. These patients for the most part had circumscribed lesions with slight pyrexia or were non-febrile. The author believes that the serum stimulates the lymphatic tissue and increases the number and activity of phagocytes, in this way exerting its curative action. The author is strongly of opinion that the use of the serum has very important results, but points out that it is more favorable in better class patients than in hospital cases, as there are less frequently secondary lesions. His experience also is that no inconvenient results follow its use, and even the appearance of a very slight amount of serum albumin in the urine does not modify this opinion. At the same time he is careful to point out that no good may be obtained by employing too large a dose.

Règnier (*Progrès Médical*, February 8, 1896,) says the serum has no special pyretogenetic action. All depends on the dosage employed. In the usual therapeutic doses to which the patient is accustomed there is no elevation of temperature, nor is there any painful or local reaction. Doses above 2 c.cm. may cause transitory elevation of temperature, which may at times reach a considerable figure, more especially in the case of tuberculous subjects. This may last two or three days and is not accompanied by any

has no effect on the circulation except that after a considerable time some people show a slowness of pulse and increase of arterial pressure. These injections cause augmentation in the number of white blood corpuscles, which may be considerable. The red corpuscles and hemoglobin increase with the general improvement. The urine shows no appreciable modification except in some cases where large doses have been employed, when there may be peptonuria, but never glycosuria nor albumin, and no increase in the toxicity. The influence on nutrition is as a rule satisfactory. After a few injections appetite increases, as does also the weight of the body proportionally. In cases of tubercle with elevation of temperature, small doses—1 to 2 c.cm.—do not produce any immediate alterations in the temperature; but after a few days the pyrexia decreases, especially when it was well marked. Larger quantities—5 to 10 c.cm.—raise the temperature for a couple of days. Afterward the elevation produced diminishes, and the patients become apyretic. The injections produce an evident effect upon the areas of tuberculous broncho-pneumonia. In general, at the end of a month, sometimes sooner, these clear up, no more *râles* are heard, and breath sounds remain slightly harsh. These satisfactory results are obtained when there are only small numbers of associated micro-organisms. Cough disappears relatively to these changes, expectoration diminishes or disappears, and the bacillus ceases to be found in the sputum. The patients perceive a feeling of well-being after the injections, and state that they feel stronger and possess an amount of energy to which they had long been unaccustomed. Maragliano (*Rif. Med.*, December 13, 1895), discusses the occurrence of certain cutaneous manifestations after the injection of the serum. The chief phenomena observed are: (1) Temporary erythemata; (2) urticaria; (3) phlegmonous infiltration of the subcutaneous tissue. All these symptoms have been observed after the injection of non-medicated serum, serum that is received from normal unvaccinated animals. The author believes that they are due to the serum *per se* and not to the anti-toxin dissolved therein. They appear in certain individuals and not in others, probably because they possess irritable tissues or because the particular serum is irritating, or from both causes combined. But from the fact that the same serum which proves irritating in one individual is non-irritating in another the author believes that the chief cause lies in the susceptibility of the individual. When these cutaneous eruptions appear the dose of serum should be reduced to 1 cm. and given every two days; if this does not check the symptoms the serum should be injected intramuscularly (in the nates), after which they hardly ever recur.—*British Medical Journal*.

INTRA-UTERINE PHOTOGRAPHY.—Pinard (*Bulletin de l'Acad. de Med.*) reported as the first intra-uterine use of Roentgen's rays an experiment carried out by Varnier and Chappuis on the uterus of a woman who died of pernicious anemia in December, 1894, being then three months and a half pregnant. The specimen had been frozen and divided by two sagittal

cuts, and preserved in spirit, and the surfaces were accurately adjusted and secured by rubber bands. The cavity of the uterus appeared clear in the center of the photograph, the outline of the specimen was distinct, and the inequalities in the thickness of the muscular wall could in parts be detected; the picture was crossed by two light vertical lines, the lines of section, and two dark horizontal bars representing the rubber rings. At the upper and right side of the cavity the fetus could be seen lying head downward and extending from the fundus to within about 4 c.cm. of the lowest part of the inferior segment; the head was flexed on the thorax and completely in profile, but the ribs and spinal column, which came out very black, showed that the trunk lay obliquely to the right and backward. The outline of the neck, occiput, vertex, and forehead was well marked, that of the nose and mouth and chin not so distinct. Near the elbow of one of the arms, flexed with the hand on the forehead, two parallel dark bands indicated the radius and ulna, and the lower part of one thigh with the knee and lower leg and the dark shadow of the femur were quite evident. Both walls of the gravid uterus, the bladder, placenta, rectum, and fatty tissue had proved more permeable to the x-rays than the rubber bands 0.5 mm. in thickness, and in the photograph shown the fetus and its position were more distinctly seen than through the unbroken membranes of an aborted ovum. It is probable that the uterine wall will be as easily traversed by the x-rays when recent and full of blood as when hardened in alcohol, and that the position and attitude of the fetus can thus be ascertained in *post-mortem* specimens without freezing and so interfering with their microscopical examination.

E. P. Davis (Am. Jour. Med. Sci.) records attempts to skiagraph a fetus of eight months and a half *in utero*; the first with a lead diaphragm and one hour's exposure gave no result; the second with an eclipse plate, no diaphragm, and seventy-five minutes' exposure, gave a faint outline of the fetus—the darker shadow of the pelvis upward and to the right. There was no outline of the skeleton, and the skull was hidden by the pelvis. Neither mother nor child was affected by the rays.—*Ibid.*

UNCHASTITY AND CREDIBILITY.—For a considerable time, says the Journal of the American Medical Association, the rule permitting a witness to be impeached by proof of general reputation for unchastity was confined, in Missouri, to females. Then the Supreme Court of the State held, in two cases, that the rule applied alike to both sexes, and that such reputation might be shown to discredit a male as well as a female witness. Now, in the case of *State v. Sibley*, the court, with three justices dissenting, overrules those two cases and reverts to its original position. Especially in a case where the defendant's character for chastity is directly involved, does the court think that such evidence is inadmissible for the purpose of impeaching his character as a witness. It is a matter of common knowledge, the court goes on to say, that the bad character of a man for chastity does not even in the remotest degree affect his character for truth, when based

on that alone, while it does that of a woman. It is no compliment to a woman to measure her character for truth by the same standard that you do that of man's, predicated upon character for chastity. What destroys the standing of the one, in all walks of life, has no effect on the standing for truth of the other.

This decision appears to us an abominably bad one. Either the court should decline to entertain the question of chastity in man or woman—and this would be by far the most equitable solution—or it should entertain it in both. To base upon the fact that woman's conduct is gauged by one moral standard and man's by another, a still further injustice, by which a woman who does that which is disregarded when done by a man is made a semi-outlaw, appears to us monstrous. In what the court speaks of as matter of common knowledge, it confounds reputation with character. The whole edifice of constructive credibility and incredibility in courts of justice ought to be swept away. It is not long since every atheist or agnostic was constructively held to be a liar; though, as John Stuart Mill said, the tribunals accepted the evidence of such atheists as were willing to lie, and rejected the testimony of those who preferred openly to avow a detested creed rather than tell a falsehood.

THE CAUSATION OF "SCHLUCK-PNEUMONIE."—In the recent discussion before the New York Academy of Medicine on the apparent increase of deaths by pneumonia in diphtheria, since the introduction of the antitoxin treatment, and the use of the above term was heard by many for the first time. In a recent issue of the London Lancet the etiology of this affection is discussed as follows: "'Schluck-pneumonie' and 'Inhalations-pneumonie' are terms used in Germany to denote that variety of pneumonia which is in most cases brought about either by the inhalation of septic particles originating in disease of the mouth or tongue or by the accidental entrance of foreign matter, such as particles of food, into the air-passages. It may also follow surgical operations on the mouth. In Professor Gussenbauer's wards Dr. Kneibich has examined twenty-eight cases, comprising twenty of 'Schluck-pneumonie' and eight of lobular pneumonia, in which the origin by inhalation was not satisfactorily made out. *Diplococcus pneumoniae* (Fraenkel-Weichselbaum) was found in twenty-three cases, and in fourteen of these a typical *diplococcus pneumoniae capsulatus* was present. *Streptococcus pyogenes* was observed in three cases, *staphylococcus pyogenes aureus* in four, *micrococcus pneumoniae* in three, *bacillus pneumoniae* in two, *bacterium coli* in seven, and *sarcina* in one. Broncho-pneumonia, and especially 'Schluck-pneumonie,' are due to the *diplococcus pneumoniae*, but the *bacterium coli* may also give rise to lobular pneumonia in man. After the inhalation of the septic matter the *diplococcus* sets up pneumonia and the bacteria penetrating with the *diplococcus* into the bronchial ramifications, but not into the pulmonary tissue, produce toxins by the continuous irritation of which the exudative inflammation is changed into induration."

INFECTIVE ENDOCARDITIS IN TONSILLITIS.—Charrin (*Sem. Méd.*) reports the following case. Male, aged eighteen, for last three months had been growing rapidly in height. Had been at work up to a few days before admission to hospital; then he was emaciated and very pale. Temperature 104° F. to 105.4° F. He had dyspnea, broncho-pneumonic patches in the right lung, liver and spleen rather enlarged, slight albuminuria and muffled heart sounds; right tonsil moderately swollen. Diagnosis: infective broncho-pneumonia, possibly influenzic, following tonsillitis. Treatment: digitalis, quinine, and salol in equal parts of rum and lime juice, frequent oxygen inhalations, dry cupping over the thorax, and when the patient became worse general bleeding. The latter was performed in order to get rid of some of the toxins circulating in the blood, and was followed by an improvement, but this did not last, and he soon died. *Post-mortem examination:* Liver fatty, spleen soft, broncho-pneumonic patches in the right lung; heart, exuberant vegetations on the pulmonary valves. In the broncho-pneumonic patches and the valvular vegetations staphylococcus aureus was present, which had been found during life swarming on the exudation over the tonsils. These are the same organisms which Bouchard has isolated from the lesions of chronic and subacute rheumatism, so often preceded by tonsillitis. The organisms were probably able to become generalized in this case owing to the anemic feeble condition of the patient. *British Medical Journal.*

VIVISECTION IN CONGRESS.—Notwithstanding the protest of the American Medical Association and numerous other medical and scientific societies, the Committee on the District of Columbia has reported a bill to restrict vivisection in the District of Columbia. Senator Gallinger (homeopathist) of New Hampshire, who has charge of this matter is on record in favor of absolute prohibition, and will probably push it to a final consideration. The time has come, therefore, for the profession throughout the country to awaken to the gravity of the occasion. It must act, and act speedily. No one should delay for a single day to file his individual protest with the Senators and Representatives from his own State.—*Journal of the American Medical Association.*

THE HYGIENIC IMPORTANCE OF AMUSEMENTS.—At the recent annual banquet of the French Société de Hygiène, one speaker dwelt upon the absolute necessity of providing amusements for the masses as a hygienic measure. This was better understood in the past than now, and entertainments were provided for the people by the State. He mentioned an instance in his own experience of a regiment whose commanding officer allowed the men to sing on the march. Health, spirits, and strength flourished, and the severest exercises were play to the light-hearted men. The officer was changed and the new-comer stopped the singing, when the men drooped and the sick-list grew long.—*Ibid.*

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ."

Vol. 21.

SATURDAY, JUNE 27, 1896.

No. 13.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS; Louisville, Ky.

Subscriptions and advertisements received, specimen copies and bound volumes for sale by the undersigned, to whom remittances may be sent by postal money order, bank check, or registered letter. Address

JOHN P. MORTON & COMPANY, Louisville, Ky.

CONSANGUINEOUS MARRIAGES.

The New York Medical Journal of the 30th ultimo quotes with due comment an article on this subject which appeared in the *Journal des Praticiens* for May 9, 1896.

The writer says that the results of consanguineous marriages have been differently regarded by various authors.

Esquirol attributed to them a predisposition to insanity among the descendants. Menière affirms that in the majority of cases deaf-mutes owe their infirmity to the ties of relationship between their parents. Lucas thinks that these marriages are a cause of degeneration in the human race; that they produce mental dullness, brutality, insanity, impotence, etc. Liebreich states that consanguinity is frequently the cause of pigmentary retinitis among the descendants. Raynaud ranks consanguinity among the conditions which may produce albinism. Luys seemed to have proved also, says the writer, the injurious influence of consanguineous marriages.

On the other hand, says the writer, others have boldly declared themselves in favor of these marriages, and state that they are not at all injurious, that generally they give good results. It is not astonishing, then, he says, that in the face of such extreme opinions other authors, such as Lévy, Bouchardat, Voisin, Darwin, Lacassagne, Ballet, and others, should view the question from both sides and affirm that these marriages are productive of both good and evil results, according to whether the contracting parties are exempt from or affected with constitutional diseases. With such a diver-

sity of opinions, continues the writer, it is difficult for physicians to decide when they are consulted by patients in regard to the subject.

M. Perrin recently made a study of the question under consideration, and gives his conclusions as follows: First of all, among the numerous affections attributed to marriages of consanguinity, idiocy, insanity, and epilepsy are due generally to heredity, but in a few cases consanguinity of the parents may certainly be the cause. As to convulsions in the young, the cases are so numerous that it is impossible to attribute this affection to the influence of consanguinity. It may have a share in the production of deaf-mutes, but it is not an invariable factor. With regard to affections of the sight, the influence exercised by consanguinity has been ascertained, and in albinism it has been distinctly proved. Concerning sterility, M. Perrin thinks this can not be attributed to consanguinity alone. He has further shown that certain congenital deformities have been so frequently observed in children whose parents were perfectly healthy that, in these cases, we are forced to admit the theory of consanguinity alone.

On the whole, says the writer, we may conclude that if under certain circumstances consanguinity and heredity are two etiological factors which combine in the same family to bring about the same morbid results, it is none the less true that in some cases consanguineous marriages among healthy persons may exercise an unfavorable influence on the children.

M. Perrin, says the writer, advises physicians not to dissuade their patients from marriage if there is no diathesis, no hereditary disease, and if they are in good health and have a strong constitution; on the other hand, it is not well to encourage them, he says, because even in the best conditions the children of such marriages have presented irremediable defects. But if the physician discovers the least trace of physical or mental affection, he should exert all his influence to prevent such marriages, for they could only be productive of deplorable results.

In this part of the world, where the poor of to-day are the rich of to-morrow, and there is no aristocracy with great fortunes which political and social policy must not permit to descend to vulgar inheritors, the question of consanguineous marriages has been of trifling importance; but in the countries of the Old World it is a question of great social moment. And, indeed, to-day among the upper four hundred in America these marriages of policy are now and then contracted, and may at no distant day assume an importance worthy the attention of the practical sanitarian.

It has never been disputed that the marriage of cousins tends to condense in the offspring whatever hereditary tendency there may be to disease in the families of the contracting parties; but the statement of M. Perrin, that deformities, etc., in the offspring may be due to

consanguinity alone, the parents and ancestors on both sides being healthy, would seem to be a statement far-fetched and hard to prove. Such is not the observation of the breeders of fine stock, nor does it seem in keeping with any known physiological law, that healthy parents should beget aught but healthy children, no matter how near akin they may be.

In view of the fact, however, that the laws of heredity are not fully understood, and that it is by no means easy to get a certificate of perfect health in any line of ancestry back to the third or fourth generation, it is best for physicians as a rule to advise against marriages of consanguinity.

Notes and Queries.

BROMALIN.—Dr. Laguer (*Neur. Centralblatt*, January, 1895,) says that bromalin is an organic bromsalt (bromethylformin), which, after the French authors Bardet and Féré, has the same properties as the inorganic bromo combinations, less the consequences of the last—furunculi, loss of appetite, etc. He used the remedy in seven cases of epilepsy and in one case each of neurasthenia, paralysis agitans, trigeminus neuralgia. The taste is not so strong as that of the other bromsalts. It is easily soluble in water and can be administered in the same doses as the bromalkali. Pills and pastilles are not eligible preparations. (Medical and Surgical Reporter.) Formulæ:

1. FOR ADULTS.

R Bromalini,	10	(3ijjss.)
Ft. chart. No. x.	S: Two to eight daily.	

2. FOR CHILDREN.

R Bromalini,	10	(3ijjss.)
Aq. dest.,	10	(3ijjss.)
Syr. cort. aur.,	90	(3ijj.)
M. Sig: A teaspoonful one to two times a day.		

TREATMENT BY HYPNOTISM.—Zaoussailoff (*Transactions of Med. Soc. of Ekaterinoslav*) communicates the therapeutical results obtained from treatment by suggestion. If the patients did not fall asleep after a simple injunction, he made them stretch out the arm and close the eyes, and left them in such a position for about fifteen minutes, or until they felt absolute fatigue, and then ordered sleep. As more complete procedures, he employed pressure on the eyes or application of the hand on the top of the head.

The awaking was easy and prompt. It was sufficient to order or to blow on the patient's face. Only once it was necessary to order several times and shake up the patient during ten minutes. Before awaking, one must suggest to the patient that he will feel very well—will not feel any uneasiness.

He applied this treatment to seven cases of alcoholism, five cases of troubles of genital functions, six cases of nervous asthenia and slight mental trouble, seven cases of insomnia, and cases of incontinence of urine and epilepsy. In the seven alcoholic cases, with six patients the suggestion had a very satisfactory result, and with the second category of patients hypnotism had a good influence; three have been entirely cured and two more or less improved. In the cases of asthenia and mental trouble some attacks became less violent. Insomnia has been entirely cured in all the patients. The incontinence of urine disappeared for a short time and came back again. With the epileptics the attacks became rare and less violent. From these cases the author concludes that suggestion has a favorable influence where other treatments remain without any effect, as in chronic alcoholism. But if the suggestion is not repeated, sometimes its action diminishes and even disappears entirely. If the suggestion continues to act, one can, by a systematic and regular treatment, succeed in curing the most rebellious and inveterate affections.—*Medical and Surgical Reporter.*

THE FREQUENT DEPENDENCE OF INSOMNIA, MENTAL DEPRESSION, AND OTHER NEURASTHENIC SYMPTOMS UPON DISEASES OF THE GASTRO-INTESTINAL TRACT.—In a paper with this title, read before the Section in Practice of Medicine of the American Medical Association at the recent meeting, Dr. Boardman Reed, of Atlantic City, pointed out that the symptoms named were admitted to result from the graver forms of disease of the alimentary canal, such as cancer, ulcer, gastric catarrh, dilatation, etc., in consequence of the lowered nutrition which these affections induced, from starvation of the nerve centers consequent on impoverishment of the blood, or from poisoning primarily of the blood and secondarily of all the tissues by the products of fermentation, putrefaction, and suboxidation. He showed that, while cancer and ulcer of the stomach were generally recognized at a comparatively early stage, on account of the pain and vomiting which characterized them, gastric catarrh, gastric atony, and dilatation of the stomach were oftener allowed to progress to an advanced and comparatively hopeless stage before they were properly diagnosticated and the patients placed under appropriate treatment. That form of gastric derangement in which an excess of hydrochloric acid is secreted, he referred to

upon passing into the bowel, inhibited or greatly diminished the activity of the intestinal ferments, which required an alkaline or at least a neutral medium, and that, besides this serious interference with intestinal digestion, the excessive acidity might set up irregular or spastic contractions of portions of the gut. He had felt these contracted portions in such cases and considered the constipation thus produced an important link in the chain of causes which resulted in self-intoxication.—*New York Medical Journal*.

QUACKERY AND INDECENCY.—The patent medicine monger has recently awakened to the fact that young girls have not been sufficiently instructed in the psychic and physical phenomena of puberty and menstruation. Here, as in modern fiction, the worst sinners are women who first catch the eye of the victim with some such complaint as that "only a woman can understand woman's woes." Frequently we encounter the picture of a miss of eighteen writhing with dysmenorrhea, and the latest abomination is a novelette in which some phase of female weakness stands between the heroine and marital bliss, and in which sexual restoration, a vegetable compound, and marriage bells are artistically mingled. The purpose of such advertisements is manifestly to direct the attention of the young woman to her sexual organs, to exaggerate the importance of trifling abnormalities incident to civilized life, to awaken the sexual instinct, and at the same time to arouse forebodings as to the existence of some physical obstacle to marriage and reproduction, so that a sale of remedies may be effected. Although actual indecency of phraseology is studiously avoided, the moral and mental tendencies of such literature are decidedly injurious. We grant that the ideal of the last generation of ignorance as innocence was not a wise one, and that the girl should be instructed in the physiology and hygiene of the pelvic organs. But the instructor should be the mother, teacher, or some other intimate and mature female friend, and we would prefer ignorance to the obtaining of knowledge from a mercenary charlatan, while false modesty is better than no modesty at all.

The climax of indecency is reached with the proclamation of the abortifacient nostrum. *Pennyroyal* seems to be the favorite catch-word, and women are informed that the pill or powder in question is prompt, sure, and safe, and this statement is often coupled with the sly intimation that it should not be taken by women who are pregnant, since it will produce abortion. In many, if not most cases, the women who buy these nostrums desire the discharge of something more than blood from the uterus, and the advertiser, without direct allusion to criminal therapeutics, is calculating not on the patronage of women already in trouble, but on those who will yield more readily to temptation if the danger of pregnancy is eliminated.

Rarely there is found a lay periodical like the *Ladies' Home Journal* which takes the ground that the great body of reputable physicians do not advertise, and that it will not cater to those not in good standing in their own profession. It would be altogether too much to ask that the average

lay periodical should adopt this dignified standard, but we hope the time is near when editors of secular and religious journals can afford to sacrifice the income from advertisements that are poisoning the minds of the children and youth of the land.—*Medical and Surgical Reporter*.

CONGENITAL TEETH.—In the May number of the *Edinburgh Medical Journal* Dr. J. W. Ballantyne gives a detailed account of several cases which have come under his observation, also of his researches in regard to this anomaly. His general conclusions are as follows:

1. Congenital teeth form a rare anomaly, but one which has long been known both to the profession and to the public.

2. Their presence has often an ill effect upon lactation, partly on account of the imperfect closure of the infant's mouth, and partly by the wounding of the mother's nipple; sublingual ulceration may also be a result, and infantile diarrhea and atrophy are more distant consequences. Sometimes, however, symptoms are altogether absent.

3. Congenital teeth have probably little or no prognostic significance as regards the bodily or mental vigor of the infant carrying them.

4. The teeth usually met with are lower incisors, but sometimes upper incisors may be seen, and very rarely molars of either the upper or lower jaw. Other facial or buccal malformations may occasionally be met with.

5. They are caused by the premature occurrence of the processes which normally lead to the cutting of the milk teeth; in a few cases it would seem that the anomaly is due to a true ectopia of the dental follicle and its contained tooth.

6. In a few instances an hereditary history has been established.

7. As congenital teeth are usually incomplete and ill-developed, and likely to be more an inconvenience than an advantage to the infant, they are best removed soon after birth, an operation which can be easily and, except in very rare instances, safely performed.

8. The occurrence of premature teeth in certain well-known historical personages is an interesting fact the importance of which has been much exaggerated.

SOME STRIKING RESEMBLANCES.—In his recent address before the graduating class of Jefferson Medical College, Prof. Parvin said:

"The monkey, the lion, the dog, the donkey, the cat, the tiger, the vulture, the weasel, the parrot, with 'the rest of the honorable company that came out of Noah's ark,' may be found among human beings. Dr. Johnson has truly described certain men as 'screech owls,' and some remember the fierce rhetorical contest between two public men in our country, each of splendid ability—Conkling and Blaine—one of them calling his antagonist a peacock; the retort was that he was a turkey-gobbler. I have a medical friend, ready in his recognition of these resemblances, who finds in the form and features of some men a bloated bull-frog. The ape and the peacock

are not infrequent degenerations from the normal type, the one in face, the other in action. The fox is in some cases plainly revealed. The lessened separation of the small, twinkling eyes, the sharpness of the nose, and the furtive expression indicate the vulpine face and character. The fox-man has the cunning and audacity of the fox; he seeks to impress people with his superior knowledge and ability, keeps his name before the public as much as possible, looks so wise, is artful in all his words and ways. He is little scrupulous in taking his brother-practitioner's patient, and preserves no golden silence as to the supposed or real errors of another. He generally has some useless fad which he never fails to impress with the solemnity of the moral law upon a client, and endeavors to make a patient believe she is wonderfully beautiful, or gifted with extraordinary intellect—she may be princess or empress, Juno or Venus, or Madame de Stael. If an operator, he does not hesitate to invite laymen to witness his skill, or make known his achievements to a newspaper reporter."

EUCASIN, THE NEW PREPARATION OF CASEIN.—Professor Salkowski, of the Patholog. Institute, Berlin, announced awhile ago that casein possesses all the nutritive value of albumin, while free from the disadvantages of the albumoses. He has recently been making a series of experiments on dogs with it in the form of a readily soluble powder, the eucasin prepared by Majert and Ebers of Grunau, accompanying a diet of bacon and rice. He found that from 95 to 98.84 per cent of the nutrients were taken up by the organism, with corresponding increase in weight and general improvement, with no deleterious results. He also experimented with the recently lauded somatose at the same time, but found that only 60.49 per cent of the nutrients were taken up in this case. The animal also had diarrhea and grew thin on somatose. He put the same animal afterward on the eucasin, when health and spirits revived and the animal gained 410 grams in the two weeks of the experiment. A two days' experiment on a healthy young man also showed a similar large percentage of nutrients retained in the organism. The details of the experiments are given at length in the *Deutsche Med. Woch.*, April 9th. Salkowski recommends eucasin therefore to the profession as a most valuable article for nutritive purposes stirred into soups, etc., and especially indicated in arthritic cases or wherever there is an excessive secretion of uric acid, as there is no nuclein in casein as in albuminous substances.

THEOBROMINE IN RENAL AND CARDIAC DISEASE.—(*Transactions of the Société de Thérapeutique.*) Professor Huchard, of Paris, stated that numerous observations warranted him in asserting that theobromine is one of the best and most reliable and constant of diuretics in the treatment of anasarca or edema associated with affections of the heart and kidneys. It is a direct diuretic, acting at once on the renal epithelium, and excites and increases the functions of the latter without altering it.

The diuresis caused by theobromine is rapid, occurring on the first day of its administration and persisting from two to four days after the last dose. There are no cumulative effects.

More than 46 grains produced in certain persons headache, nausea, and vomiting, but rarely cerebral excitement. An average dose is from 2 to 3 grams (31 to 46 grains) in wafers, each containing 0.50 gram ($7\frac{3}{4}$ grains). Larger doses, 4 to 5 grams (1 to $1\frac{1}{4}$ 3) are without danger and are often employed.—*New York Polyclinic.*

EUROPEAN APPROVAL OF AMERICAN LAWS IN REGARD TO THE OPHTHALMIA OF THE NEWBORN.—The Société d'Ophthalmologie has been having its annual congress at Paris, May 4-7, and Lucien Howe, of Buffalo, described our laws to prevent blindness from this cause. The association regarded them with favor, and several urged their adoption in France. All agreed that attending physicians and midwives must be made to realize their great responsibility in this respect, more than some of them do at present. The suggestions of "*Docteur Buffalo*" are being quoted with approving comment in many of our foreign exchanges.—*Journal of the American Medical Association.*

WHAT IS THE POSSIBLE MINIMUM DEATH-RATE?—The late Dr. Parkes fixed 17 per 1,000 as the "mortality incident to human nature," and in his time—the infancy of hygiene and sanitation—even that figure seemed Utopian. But what shall it be now fixed at in view of the reduced rate in Greater London? In 1894 the death-rate had fallen from 20.5 for the decennium, 1881-90, to 17.7 per 1,000; and last year, 1895, when the mean was 19.7, there were sanitary areas in the great metropolis with the following figures: Wandsworth, 14.8; Lee, 14.5; Lewisham, 14.4; Stoke Newington, 13.4, and Hampstead, 12.

E. P. WILLIAMS, M. D., and Kenneth Cameron, B. A., M. D., contribute an interesting paper to the *Journal of Pathology and Bacteriology*, London, Vol. III, No. 4, on "The *Bacillus Pyocyaneus* in Children." Four fatal cases are described, the *post-mortem* examination resulting in the discovery of general infection by the *bacillus pyocyaneus*. The clinical picture presented by these four cases is illustrated by the conclusion of the article as follows: "A careful bacteriological investigation of all cases of so-called infantile marasmus, especially when complicated with skin eruptions, whether petechial or pustular, diarrhea, fever and muscular disorders, may demonstrate that the distribution of the micro-organism is much more widespread and much more disastrous in early life than is generally believed. The close resemblance of the symptoms of one of the cases described to those generally described in text-books as purpura hemorrhagica, suggests a causative relation between the bacillus and that lesion." *New York Polyclinic.*

AN AMUSING INCIDENT.—*The Lyon médical* for April 26th contains the following account of an incident which is said to have occurred in Chicago: A child was seized with a severe attack of croup during the night, and its father, whom we will call B., dressed himself hurriedly and started for a physician. The night was an exceedingly dark one, and his wife insisted that he should take his revolver for safety. In turning a corner of the street he was violently jostled by an individual who excused himself and passed on, when B., prompted by a sudden impulse, felt for his watch and found it gone. Instantly he leveled his revolver at the stranger and called to him to stop or he would shoot; the man stopped, and B. ordered him to give up his watch. The man obeyed, and B. proceeded on his way to the physician's house. On his return he recounted his adventure to his wife, who told him that she had taken the precaution to remove his watch from his coat before he left the house. Half an hour afterward the physician arrived very much excited, and stated that in returning to his house he had been stopped by a man who had robbed him of his watch.—*New York Medical Journal*.

STILL ANOTHER METHOD OF EXTIRPATING CANCER OF THE BREAST. Sansini, of Palermo, describes his method in the *Riforma Medica*, No. 11, which he asserts will prevent future relapses. He makes a pear-shaped incision, the large end embracing the breast and the small end terminating in a couple of incisions meeting at the axilla. After the tumor is removed with the pectoralis major, he makes a similar incision in the back, and applies the flap thus procured to the open space in the breast. The flap cut in the back is raised except at the small end which reaches to the insertion of the latissimus dorsi. It is then applied to the open space in front, twisting it a little to bring it around in front over the wound. The edges are then sutured, and the edges of the wound in the back are pulled together, and also sutured, as can be readily done owing to the elasticity of the skin, a couple of liberating incisions being made if necessary.

EFFECT OF ACOUSTIC SENSATIONS ON THE PULSE AND RESPIRATION. Following the suggestions in the works of Mosso and others, and using a sphygmograph and pneumatograph similar to Marey's, with a noiselessly revolving kymographion, a series of experiments in Wundt's laboratory have established the fact that pleasurable acoustic sensations sensibly retard the pulse and respiration for a time, while unpleasant sensations accelerate them. As pleasure changes to annoyance from repetition, the slower pulse and respiration change to faster. The reverse is the case when voluntary attention changes into involuntary; the pulse then grows slower to normal or even slower than normal.—*Centralblatt f. Physiologie*.

HYSTERICAL POLYURIA CURED BY ELECTRICITY.—(*Transactions of the Société Française d'Electrothérapie*, Paris.) M. Jules Grand presented a woman, forty-two years old, who had been passing from six to eight quarts

of urine each day and who was manifestly hysterical. Treatment consisted in the use of electricity of high tension, a machine with a large platform on which the patient was seated being employed, and friction over the clothing with a metallic electrode for two or three minutes. The sittings were twenty in number, lasting from twenty to thirty minutes. The cure was complete.—*New York Polyclinic.*

At a recent meeting of the French Congress of Surgery, Dr. Reclus proposed, as a substitute for amputation, a surgical procedure which carries conservatism to a dangerous extreme. His method consists in rendering the injured member absolutely aseptic, in doing which he depends principally upon hot water, 140° F. After this is accomplished an aseptic dressing is applied that prevents decomposition in any tissue that may fail to revive. When natural lines of demarkation have been established, a very limited amount of operative work will usually suffice to remove the devitalized or useless portion.

SLOBBERING.—Dr. Sauchez de Silvera, we learn from *La Sperimentale*, has not thought this homely subject unworthy of study, and he has written an essay upon it. From the observations of Doctor Couëtoux, of Nantes, and his own, he concludes that healthy infants never dribble; that infants which dribble only in the day time, though apparently in good health, have their digestive functions impaired; that infants which dribble at night are suffering from obstruction of nasal respiration to a greater or less degree; that these phenomena are altogether unconnected with dentition.—*New York Polyclinic.*

SMEGMA AS A DIAGNOSTIC DIFFICULTY.—It appears from an article in the *Fortschritte der Medicin* for May 1st, by Dr. Grethe, of Halle, that the smegma of the genitals may take the shape of rodlike particles and appear in the urine in a form not to be distinguished from the tubercle bacillus, short of culture experiments or tests by means of staining. The surest way for the practitioner who has not the resources of a laboratory at his command, Dr. Grethe thinks, is by staining with a concentrated alcoholic solution of methylene blue.—*New York Medical Journal.*

In Chester, England, there recently died a man who had distinguished himself by appearing before the City Justices 130 times in the capacity of a criminal. His father had been tried 35 times, one sister 67, and another 29 times, making a grand total for the family of 347 trials. The estimated cost of these prosecutions was \$10,000. This is only one example of inherited criminal propensities, a knowledge of which must extend to the masses before popular opinion will demand that the State shall provide for this class of defectives as is now done for the insane.

ONE of the interesting characters of the fourteenth century was the surgeant surgeon of Edward III, in 1346, John of Arden. He gives a Description of ye qualities which ought to be in ye surgeon that performeth any operation in chirurgery:

"First, that he be devout. Secondlie, charitable to ye poor. Thirdly, to use few words. Fourthly, to avoid drunkenness. Fifthly, to be chaste both in words and gesture, as well as to fear ye not. Sixthly, not to undertake an incurable disease."—*Medical News.*

THE Faculty of Bellevue Hospital Medical College, at its meeting on May 5th, took the following action:

Dr. J. Lewis Smith, in consideration of his long connection with the college, was appointed Emeritus Professor of Diseases of Children.

Dr. George D. Stewart was appointed Adjunct Professor of Anatomy.

Dr. William P. Northrup was appointed Professor of Pediatrics.

THE University of Pesth has conferred an honorary degree upon Dr. John S. Billings, who is now traveling in Europe. The same degree was conferred at different times upon Lord Kelvin, Herbert Spencer, Max Müller, and James Bryce. Dr. Billings is now librarian of the New York Consolidated Library. He already has the degree of LL. D. from Edinburgh.

A SERIAL known as the Archives of Clinical Skiagraphy is soon to appear in London, edited by Dr. Sidney Rowland. The first plate will be the osseous system of a child. Others will follow, showing obscure injuries of the bones entering into the formation of the knee-joint. The first issue will contain six plates.

DEATH OF THE QUINTUPLETS.—The daily press announces the death of the last of the quintuplets born in Kentucky April 19th, and remarks that it is believed they were visited to death by the curious in the town.

MME. AUDIFFORD has presented the French Academy with 800,000 francs, the interest of which is to be awarded, without regard to nationality, for the discovery of a cure for consumption.

THE Virginia Medical Monthly, so ably conducted by Dr. Landon B. Edwards for almost a quarter of a century, has been changed in name and frequency of publication to a semi-monthly.

DR. JOHN WHITRIDGE WILLIAMS has been appointed Associated Professor of Obstetrics at Johns Hopkins University, and is now in charge of that department.

THERE are three companions with whom you should keep on good terms—your wife, your stomach, and your conscience.

Special Notices.

SUMMER DISTURBANCES OF CHILDREN.—In fermentative disorders of the alimentary canal in the young, middle aged, or old, listerine has given most satisfactory results. In the summer diarrhea of children, Dr. I. N. Love, of St. Louis, speaks very highly of it, given in combination with glycerine and simple syrup. A formula that I have time and again used—in fact it has almost become routine with me of late years—is as follows:

R	Bismuth Sub. Nit.,	Half a drachm.
	Tr. Opii,	Twenty drops.
	Syr. Ipecac,	} aa Two drachms.
	Syr. Rhei Arom.,	
	Listerine,	Half an ounce.
	Mist. Creta,	One ounce.

M. Sig.: Teaspoonful as often as necessary, but not more frequently than every three or four hours. This for children about ten or twelve months old.—*Deering J. Roberts, M. D., in Southern Practitioner.*

FERRATIN, IRON TONIC AND FOOD.—J. S. Perekhan (Chicago Medical Recorder, January, 1896.) The author reviews the literature on Ferratin, quoting Schmiedeberg, Germain See, Dujardin-Beaumetz, Marfori, Jaquet, Fackler, Einhorn, and others, and then cites a case of anemia in his own practice "because the improvement under the use of Ferratin was so striking as to merit special mention." Patient, a girl of seventeen, became anemic after an attack of grippe, lost her appetite, etc.; condition on November 15th as follows: face pale, of waxy color, lips and conjunctiva almost white, headaches, insomnia, constipation, shortness of breath, bad appetite, etc. Half-gram doses three times daily, with hygienic regulations, caused improvement after first week, and gradually her appetite returned, headaches and insomnia disappeared, red color was restored to lips and face, and within five weeks the blood corpuscle count showed an increase from 2,100,000 to 4,150,000 per c.cm. Author concludes that "Ferratin can be safely recommended as a hematinic remedy, with suitable diet, hygiene and exercise not to be neglected."

D. T. HUDGENS, M. D., Elizabeth, Ark., says: I have used S. H. Kennedy's Extract of *Pinus Canadensis* in leucorrhea with very good results. I have had under my treatment Mrs. S., aged thirty-three years, for leucorrhea, with anteversion of the uterus. I used the White Extract per vagina as a local treatment for the leucorrhea, and the treatment was attended with success. I am satisfied that *Pinus Canadensis* should occupy a prominent position in our materia medica.

LABOR SAVING: The American Medical Publishers' Association is prepared to furnish carefully revised lists, set by the Mergenthaler Linotype Machine, as follows:

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THE AMERICAN PRACTITIONER AND NEWS

"*NEC TENUI PENNĀ.*"

VOL. XXII.

LOUISVILLE, KY., JULY 11, 1806.

No. I.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—*RUSKIN.*

Original Articles.

EYE-STRAIN.*

BY A. G. BLINCOE, A. M., M. D.

During the last eight years I have devoted a considerable part of the time I have had to spare from an average general practice to the study of eye-strain, and my conclusions in regard to this subject are such as lead me to believe that they may be of some interest to this Society.

You are all aware perhaps that eye-strain is said to be due either to the continuous action of the ciliary muscle in cases of refractive error, or to the strain of the external eye muscles in fusing images when these muscles are not in equilibrium, or to both these cases combined.

The normal eye is so constructed that its possessor sees distant objects without effort, and it is consequently at rest, except when used for close vision; but, in case there is a refractive or muscle error, there is a continuous strain all day long while the patient is awake.

This constant strain may give rise to quite a variety of symptoms. There may be only one or more of the usual symptoms of asthenopia, such as pain about the eyes, blurring or running together of letters, a watering of the eyes, dimness of vision, a sense of fatigue on using the eyes, a twitching of the lids, a feeling of sand or something in the eyes, photophobia, etc., or the strain may cause some of the many inflammatory diseases of the eyes, or there may be some of the functional nerv-

* Read at the June meeting of the Kentucky State Medical Society, 1896.

ous diseases, such as headache, vertigo, nausea or nervous dyspepsia, neurasthenia, neuralgia, hysteria, chorea, and various obscure nervous troubles. It is even said that epilepsy and insanity are sometimes due to this cause.

The above mentioned symptoms of asthenopia and sore eyes point so plainly to the seat of the trouble that it is quite natural to suspect eye-strain as a cause in these cases, but the nervous troubles being reflex, and occurring often in persons not knowing they have any eye defect, or not making any complaint whatever of the eyes, makes it difficult for the patient, and even sometimes for the physician to realize that the trouble may be due to straining the eyes.

The treatment of eye-strain consists in correcting refractive errors by properly adjusted lenses. This can only be done in most cases (in young people at least) after fully paralyzing the accommodation, atropia being the best agent for this purpose. If after this there is sufficient muscle error remaining to cause trouble, it must be corrected also. There are several ways of doing this. The best in moderate degrees of heterophoria is said to be by strengthening the weak muscles by prismatic exercise. Some extreme cases may require graduated tenotomy of the stronger or advancement or shortening of the weaker muscles. In some cases the wearing of prisms seems to do well. I have sometimes apparently overcome a slight defect of the lateral muscles satisfactorily by decentering the lenses, bearing in mind the rule that each centimeter of displacement is equal to one degree of prism for each diopter of lens. It is much easier, however, to give the treatment in this way in general terms than it is to apply it in practice. The latter in many cases requires a considerable amount of time and patience, even in one who by study and practice has acquired the necessary skill to do it properly.

In the last four years I have examined the eyes of about one hundred and twenty-five persons in whom, from some of the above mentioned symptoms, I suspected eye-strain, and have been surprised to find either refractive or muscle error, one or both in every case. This fact, together with the fact that a very large majority of those whom I

another from headache. Of this number I have prescribed glasses for sixty-seven. In six of these cases I have been unable to learn the results. This leaves sixty-one cases in which the results are known. Of these twenty-five or about forty per cent are cured, thirty-one or over fifty per cent are benefited, and only five not benefited, making a total of about ninety per cent cured or benefited. I can, therefore, quite readily agree with those who say that eye-strain causes more headache than all other causes combined.

A brief history of a few cases may be of interest. Miss H. M., age twenty-two, had for years suffered from almost constant headache and great nervousness. She had never had the slightest trouble with her eyes, and her vision was better than normal. She was very skeptical when first told that she might possibly be suffering from eye-strain. An examination of her eyes under atropia showed a high degree of latent hypermetropia. I gave her a partial correction, and she has been wearing her glasses for three years with perfect relief except during her menstrual periods.

R. B., male, age forty-four, had for years suffered from frequent severe spells of headache. On examination I found no refractive error, but four and a half degrees of esophoria. Three years ago I gave him a pair of prisms of two degrees each, base out, and he has been wearing these spectacles constantly since then without a particle of headache.

Mrs. J. K. C., age twenty-three, had since girlhood suffered from very severe spells of sick-headache, occurring as often as once or twice a week, often keeping her confined to bed for two or three days of that time. Last July I prescribed a pair of glasses for her, and, with the exception of two slight spells soon afterward, she has had no headache since. The refractive error in her case was not great, so small in fact as it that a skillful refractionist, who had examined her eyes before I did, told her that her headache was not due to eye-strain as she did not have eye defect enough to cause it, yet a correction has relieved her, thus confirming my belief in the statement of others that small errors may cause considerable trouble.

It is even said that small errors may cause more trouble than larger ones, from the fact that the eye being able to overcome them involuntarily does so, whereas, if the defects were greater, the effort might not be made.

The other cases which I have examined were several cases of asthenopia and sore eyes, one of vertigo, four epileptics, and two cases

of insanity. Satisfactory results were obtained in most of the cases of asthenopia and sore eyes. The one case of vertigo was cured; of the four epileptics two were treated with some benefit. The two cases of insanity were simply examined, but not treated. In all there was either ametropia or heterophoria or both.

I therefore conclude that eye-strain is of very common occurrence; that it is a frequent cause of asthenopia, sore eyes, headache, and functional nervous troubles and that the treatment mainly consists in the correction of the ametropia and heterophoria by properly adjusted spectacles.

I do not mean to say, however, that every person who has eye defect suffers from it. I think there are some persons who go through life with a refractive error without suffering serious inconvenience from it. I am prepared to believe this from the fact that after examining many elderly people for presbyopia I have often found ametropia or heterophoria which had never caused any of the troubles usually arising from these conditions. On the other hand, I have seen younger persons suffering from asthenopia, etc., who dated their trouble from a spell of sickness. It seems therefore that in strong and healthy persons eye-strain may show no symptoms, but if these persons become weakened by disease or otherwise the symptoms may then make their appearance.

In regard to this matter Hotz says: "Many eyes can endure a great amount of strain with impunity, while others are so constituted that their powers of endurance are quickly exhausted. One person may need glasses for the correction of a small amount of ametropia, while in another the correction of a much higher degree is unnecessary and glasses would be superfluous. We can not draw the line at a certain amount of ametropia, but should correct it, no matter how slight in degree, whenever it leads to disturbances of which eye-strain constitutes the most frequent cause."

BARDSTOWN, KY.

TREATMENT OF ACUTE, ARTICULAR, CHRONIC, AND MUSCULAR RHEUMATISM.*

BY T. H. BAKER, M. D.

The theory of the pathology of a disease determines the mode of treatment, and as there are many theories as to the pathology of rheumatism, none of which are proven, the treatment is necessarily symptomatic and empirical. The adherents of the microbic origin of the disease advocate drugs for the destruction of the micro-organism. Believers in the lactic-acid theory recommend the extensive employment of alkalies, claiming that thereby the production of this agent is prevented. The uric-acid theory is advanced, and treatment is directed to the elimination of this poison. Finally, those who hold to the neurotic theory explain the beneficial effects of their treatment by its action upon the nervous system.

Under such circumstances and facing so many theories, some of which are unfounded, and none of which are yet proven, an article upon the treatment of this disease must necessarily be limited to a discussion of such means and such drugs as have been most beneficial in the writer's own practice.

"Remove the cause" is an axiom as important in the treatment of this as in any other disease, but, owing to our own imperfect knowledge of the real nature of this disease, it can not often be done. The search for the cause is generally futile, and we soon find that many of the alleged causes are mere coincidences.

In the acute form rest in bed is an absolute necessity, because it not only lessens the danger to inflammatory action in the joints and reduces to a minimum the dangers of endocardial involvement, but also limits the dangers of relapses. Even in the cases of a subacute character bodily rest should be enjoined.

Though generally advised, I fail to see the necessity of swathing a patient in cotton batting, blankets, oiled silk, etc. In a room which can be maintained at a regular temperature (65° to 70° F.), I can not think it adds to the efficacy of treatment by having a patient already uncomfortable from pyrexia made still more miserable by swathing him in cotton batting.

The diet in acute articular rheumatism should be of a non-nitrogenous nature, milk being one of the best articles. Concentrated foods

* Read at Louisville Academy of Medicine, February, 1896.

other than animal can be used when for any reason milk can not be borne. In the chronic cases a more liberal and nutritious diet is to be recommended. As much nitrogenous food as can be digested with facility, together with nourishing, concentrated articles, should be allowed. Stimulants as a rule are contra-indicated, but may be called for in anemic individuals, or in sudden cardiac complications.

Many and various are the local means which have been and are still used to lessen the pain due to the inflammatory action. I take it that the blistering treatment has few adherents at the present day unless in these exasperating cases which have stubbornly resisted every other line of treatment. Ichthyol (25 to 100 per cent) rubbed into the affected joints has seemed to me in some instances to relieve pain and certainly causes no irritation.

My own preference is for a mixture of salol, $\mathfrak{z}\text{i}$; ether, $\mathfrak{z}\text{i}$; colodion, $\mathfrak{z}\text{i}$, painted on the affected joints twice or more daily. This has certainly resulted in relief of pain even if no permanent benefit ensued.

Since 1875 very little that is new or valuable regarding the treatment of the various grades of rheumatism has been presented. The salicylates and alkaline salts aided by salol and phenacetine continue to hold the leading place in the treatment of acute and subacute cases. My own preference is for the sodium salicylate, believing it not only more palatable and less liable to disorder the stomach, but also possessed of a more prompt and decided action than salicylic acid. To an adult I administer ten to twenty grains every two to four hours until the desired effects are obtained, or until tinnitus is produced, after which I either lessen the dose or substitute salicin. Given in this way this drug will, in a great majority of cases, relieve pain after four to six doses, reduce fever, and cause the local swelling to subside in from sixteen to forty-eight hours. Ol. gaultheria, salol, salophen, and allied products depend for their action upon the salicyl elements contained therein, and I have yet to see where either in safety, palatability, or efficacy they are equal to the sodium salts. In the chronic and muscular forms of the disease under discussion the salicylates are not so reliable, but at the actively inflammatory periods and exacerbations they are not only signally useful, but indispensable. Quinia in the early stages is of benefit in controlling the pyrexia and thereby rendering the patient more comfortable, but has no specific action on the disease. Antipyrin, antifebrin, antikamnia, and phenacetin will relieve pain

and reduce fever, but have no action beyond their antipyretic and analgesic effects.

Benzoic acid has been recommended, but even its adherents claim for it no superiority over the salicylates. Good results are claimed from an injection of carbolic acid (10 per cent) into the painful joints. I have not tried this method. Iodide of potassium alone or in combination with the salicylates is of undoubted benefit in the chronic forms. Quinia given with iodide of potassium will give gratifying results in those cases where the pain is worst at night. Colchicum, aconite, and guaiacum are not much used, but it occurs to me that colchicum would be of unquestionable service in those old chronic cases where the joint changes are allied in nature to those which take place in gout.

The general health of the patient should be carefully considered, and if necessary, tonics, such as cod-liver oil, arsenic, iron, and strychnine should be employed to increase the resisting power of the tissues to the disease.

In the treatment of muscular rheumatism the only indications are to counteract the diathetic condition and to relieve the pain. Patients, subject to muscular rheumatism, should carefully observe the laws of hygiene. I have found no drug which has any specific action upon the disease, or any which shortens its duration. I do not remember of ever having seen the slightest benefit result from the salicylates unless the muscular trouble is complicated with joint affections. Massage if persevered in is of unquestionable service. For the relief of pain I have seldom found it necessary to resort to opium, but am very fond of antikamnia. Of this drug the dose usually recommended is useless, but ten to fifteen grains, four to six hours apart, will most certainly relieve the pain, and I have yet to see any depressing effect follow its use.

Conclusions. 1. In acute cases the salicylates will cure a larger number in fewer days than any other known mode of treatment.

2. In chronic cases the salicylates are unquestionably serviceable, either alone or in combination with other drugs.

3. While the salicylates neither prevent nor ameliorate the cardiac complications (except by lessening the number of days the patient is exposed) they certainly do not produce nor aggravate this complication.

4. Under the salicylate-treatment relapses are not so frequent as in other modes of treatment provided the administration of the drug is not

suspended too suddenly after the cessation of the pyrexia and articular symptoms.

5. In uncomplicated myalgia the salicylates render little or no benefit.

6. As from fifty to sixty per cent of all cases of rheumatism are attended by cardiac complications, the proper protection of the heart is the most important indication to be fulfilled.

LOUISVILLE.

SOME COMPLICATIONS AND SYMPTOMS OF RHEUMATISM.*

BY CRITTENDEN JOYES, M. D.

Demonstrator of Laryngoscopy, etc., University of Louisville.

That rheumatism is frequently attended by affections of the eye and throat is not denied by any; that these affections are rheumatic is questioned by many of the best authorities. Therefore in my paper to-night I shall treat of them both as complications and as symptoms of the disease.

The affection of the eye which is most generally recognized to be of rheumatic nature and origin, is an affection of the scleral and episcleral tissues. Episcleritis is an inflammation of the subconjunctival tissue, which occurs most generally at the outer or inner angles of the eye. The differentiation between episcleritis and scleritis is very vague, and to my mind seems to be based upon the fact that episcleritis is perhaps more circumscribed, and does not tend to the involvement of adjacent structures. Therefore in describing the diseases I will use the term scleritis.

Scleritis may be acute, but is more often subacute or chronic. In the beginning the conjunctiva may be a little swollen, but there is nothing more than a watery secretion. A pink patch appears generally in the region of the insertion of one of the recti muscles. This pink area may increase gradually, or new areas form and run together. This pink area later becomes somewhat bluish, and it, together with the watery secretion, slight photophobia, and slight diminution of vision constitute the principal features of a mild attack.

Circumscribed scleritis is generally chronic, and is about the same as above described, but it is frequently far more severe and involves

* Read at the Louisville Academy of Medicine, February, 1896.

the iris, ciliary body, and the cornea, one or all. After continuing for some time the sclera becomes thin and of a bluish hue and staphyloma may form; we may have sclero-keratitis, the cornea becoming at the part affected densely opaque. In favorable cases the opacity disappears. In the acute form the local treatment should consist of atropine, hot water, or sometimes cold water. Morphine in small doses may be necessary to relieve the pain or else, we can use phenacetin or antipyrin. After the acute symptoms have subsided stimulation with yellow oxide ointment may be kept up. Constitutional treatment should be given in all cases, and I think the best remedies are salol, the salicylates, and iodide of potassium.

In the severer cases iridectomy is sometimes performed. Bandaging to check the formation of staphyloma, as it is not due to intra-ocular pressure, but weakness of the sclera. Other operations are demanded later on, but they are rather for the sequelæ than for the disease. Meyer, Noyes, Juler, and Oliver all hold that many if not most of those cases are rheumatic or gouty, and the favorite constitutional remedies are the ones most used in rheumatism. However, it is a question whether the mild cases would not do about as well without treatment of any kind except that directed toward relief of pain.

Another frequent manifestation in rheumatism is iritis. This is not so generally admitted to be rheumatic. In looking over the text-books at hand I find that Noyes places rheumatism next to syphilis, which he says is by far the most frequent cause. Juler says it is frequently due to rheumatism and describes a rheumatic iritis. Meyer says: "As to the rheumatic diathesis it is true that iritis often results from exposure to cold, and is accompanied with rheumatic pains in other parts of the body; but it would be inaccurate to say that this variety of the disease has any special forms." The writers in the journals to which I have had access are likewise at variance.

Rheumatic iritis in my experience has seemed to be more often of a serous than a plastic type. And even where it has been plastic there is less plastic exudation than in the syphilitic form, hence we are not so apt to have adhesions.

Rheumatic iritis is more serous than plastic, hence we are not so apt to have adhesions as in other forms. The objective symptoms are, pink circum-corneal injection, hazy, aqueous, and change in color of iris. The subjective symptoms are impairment of vision, photophobia, and pain—pain in the orbital and malar regions, forehead, and top of the

head. The pupil in rheumatic iritis is frequently dilated, but is sluggish in action. The pain in rheumatic iritis is sometimes very great, greater than in other forms.

The prognosis as to vision is better than in other forms; but the duration is apt to be long. Treatment consists of hot water and atropine, together with salol salicylates, iodide of potash, or some other good remedy for the rheumatism diathesis. I am somewhat cautious about using atropine for these cases, for I fear the increased tension. Then I use pilocarpine injections in its place. Leeches have a beneficial effect on these cases.

It seems to me that there should be no doubt that iritis is sometimes a manifestation of rheumatism and not simply a complication. In rheumatic iritis the symptoms frequently keep up long after full dilatation, whereas in syphilitic and simple iritis they generally give way. I have had under observation in hospital and private practice fourteen or fifteen patients who repeatedly dated attacks of rheumatism from iritic attacks. In thirty-four consecutive iritis cases at the University Dispensary nineteen were specific; seven, rheumatic; eight, traumatic or simple. The seven put down as rheumatic all were subject to rheumatism; several of the ones specified as simple had rheumatic taint in the family.

Another form of eye trouble which seems to be due to rheumatism is a conjunctivitis which is confined to the eye-ball and is accompanied by a watery secretion. The deep vessels are engorged. There is both tenderness and pain, and the patient complains greatly of burning. This is called by English writers catarrho-rheumatic ophthalmia. I have several patients whom I see every two or three months for a conjunctivitis, and who are not in the least benefited by local treatment, and who have all had their errors of refraction corrected. They are relieved after the first day's use of salicylate of soda. These four cases presented conjunctivitis, palpebral and ocular, without involvement of scleral or episcleral tissue.

Acute tonsillitis is an inflammation of the tonsil, superficial or deep. It may or may not involve the lacunæ and the connective tissue surrounding the tonsil. Age is an important factor in its production, and it is most common at the same period of life that rheumatism is, namely, between fifteen and thirty-five years of age, but no one is exempt. Males are affected oftener than females; probably on account of being more exposed to cold by their occupations. Enlarged tonsils

predispose to it. Cool and moist weather excites it. It is sometimes caused by the irritation from a piece of tooth-pick or pieces of food. It is probably septic where it occurs simultaneously in both tonsils as pointed out by Fox.

The symptoms are at the outset, general malaise for about twenty-four hours, then fever commences and reaches about one hundred and three degrees in twenty-four hours, and frequently goes as high as one hundred and five degrees in forty-eight hours. There is frequently great pain in the back for a day or two. Along with these symptoms there is a feeling of fullness in the throat, with pain on swallowing. The crypts of the tonsils are generally filled with yellow or white secretion; there is inability to open the mouth wide on account of pain.

Prognosis as to time: five to twenty days; superficial forms recover in a few days; parenchymatous in eight to twenty days. The two principal varieties of the disease or the follicular and the peritonsillar, the follicular variety closely simulating diphtheria.

As this paper is meant more to bring out the connection between the special diseases and rheumatism rather than to differentiate between the varieties of the diseases, I will pass on to the treatment.

In follicular tonsillitis guaiacum has been recommended in one form or another almost as a specific by Mackenzie and other great authorities, but it does not seem to me to exercise any such effect. Aconite in drop doses is also highly recommended, and is frequently of great service. Whatever be our line of treatment, a brisk catharsis is always a very important step in the beginning, and calomel seems to be about the best means of obtaining this. My best results are all obtained when I use salol or the salicylates, together with some local application. Until recently I have always used gargles of hot solution of bicarbonate of soda alternately with peroxide of hydrogen or else have used brown gargle. But of late, owing to the fact that gargling is difficult and even painful, I have been applying Loeffler's solution of toluol by means of a brush or cotton applicator to the surface of the tonsils from one to three times a day, and in my last fifteen cases of follicular tonsillitis under this treatment (catharsis, salol or salicylates, and local applications of Loeffler's solution) the average duration has been three and one half days.

In the peritonsillar variety or quinsy I doubt very much whether any treatment other than that which hastens suppuration and aids in

the discharge of the pus is of any avail. However, I consider that this variety is more often rheumatic than the follicular.

There is a variety of throat trouble due to rheumatism which presents great pain and almost no physical signs. It attacks both larynx and pharynx, and is very properly called rheumatic sore throat. Upon examination we are apt to find nothing more than slight hyperemia. The hyperemic areas being migratory. This is associated frequently with pains in the muscles of the neck. The pain is increased on pressure. The treatment of these cases is constitutional almost altogether.

In conclusion, I will state that it is almost a matter of routine with me to consider these cases which I have described as rheumatic and to treat them as such. Of course I treat any other constitutional disturbance I may find.

LOUISVILLE.

NEUROLOGICAL FRAGMENTS.*

BY J. B. MARVIN, A. B., M. D.

Professor of the Principles and Practice of Medicine in the Kentucky School of Medicine.

I hoped to have here to-night a case of locomotor ataxia with all the classical symptoms, which was referred to me by Dr. Guest, but the patient has failed to put in an appearance. He denied any history of syphilis. He has a perforating ulcer which has destroyed the big toe of the left foot. On the same leg at the knee he has a Charcot joint. There is another point in his history which is interesting to me—pain or numbness running to the side, very apt to be mistaken for intercostal neuralgia or lumbago. I have seen instances of this kind in which this was the only symptom; and I think it is a point worth bearing in mind that these cases of anesthesia or hyperesthesia about the lower dorsal or intercostal region ought not to be passed off as lumbago or intercostal neuralgia, but you should go on with the examination, testing the reflexes and ocular symptoms. While recognizing that a man may have had syphilis and not have known it, I think we have gone too far in pronouncing nearly all these cases as syphilitic—ninety-seven per cent, as claimed by some authors. Mayer claims none, and that the syphilis is merely coincident. Another recent

* Remarks before the Louisville Medico-Chirurgical Society (stenographically reported), May 13, 1896. For discussion, see p. 18.

writer reports one hundred and eight cases, and in only thirty was there a history of syphilis remote or direct. It rather goes against the grain with me, when a man with a perfectly clean history and with no reason for denying the fact to force myself to believe that he has syphilis. I think we have done harm by getting it into our minds that these cases are syphilitic and must be treated by antisyphilitic medicines. Mercury and iodide of potassium only benefit the earlier symptoms. Later they increase the degenerative process, and more cases have been harmed than have been benefited by them. I think I have seen the best results by not giving antisyphilitic treatment; where there is no palpable evidence of syphilis I substitute arsenic and phosphorus. Another point is that we may have the symptoms of locomotor ataxia without any lesion of the cord. The degenerative changes may take place in the peripheral nerves, giving rise to all the symptoms of locomotor ataxia without any lesion of the cord, or the trouble may be further in, at the posterior nerve roots.

The next is a case of spastic paraplegia. I have reported several cases to the Society, and brought before you a theological student with this trouble whom I have had under observation eight years. Since I saw him first he has completed a theological course and has married a wife. The case which came to the clinic had the most marked ankle clonus I have ever seen, and presents all the features of the disease in a very beautiful way. I read a paper before the State Society several years ago and showed some specimens, one a secondary and the other primary. From extended study I doubt if any of these cases are really primary.

I have another case, angio-neurotic edema in the mother of the first case of epilepsy I ever treated, and which was the only case of epilepsy in my experience which I claim to be absolutely cured. She went two years, then three years, and now has gone six years without an attack. The father died of organic disease of the heart. The mother is a woman of nervous temperament. In the last two years she has developed peculiar swellings of the arms, sometimes of the leg, and sometimes, but rarely, of the face. These swellings would come on suddenly with stinging and prickling sensations. The case has gotten a great deal better under general tonics.

Another case (astasia-abasia) which puzzled me quite a while was in a lady far past middle life. Dr. Bailey saw her during an attack of grippe. After a time she went to her home at Lagrange, and for some

time was in a feeble condition. (The patient had a feeble heart, and I thought there might be myocarditis.) At my second visit I was satisfied that there was a neurotic element, and that if they gave her less medicine and attention she would get better. I received a letter from her son, who is a physician and a highly intelligent man, saying that she was better, but could not walk. She was brought to my office, and I examined her carefully and could not detect any trouble. Sitting down the reflexes were good, and she had good muscular power. The patient has never walked since. She uses the sewing-machine, and in bed will go through any movement of the leg, but she will not walk. It is the only case I have ever seen as well marked and of such long duration. This has been going on for a year. While examining this woman at my last visit, about six months ago, I was asked to see her daughter who is quite a musician. As soon as she came in I was struck by a curious deformity involving the right side of the head and face, that side being much larger than the other. I thought at first it was a case of hemiatrophy, but it turned out to be hemihypertrophy. These cases have been very rare. I saw another this past week, the patient having it in a slighter degree. In her there is in addition to the thickening on that side some exophthalmos.

Another point I wish to speak of is left-side pain. I have been bothered a good deal with patients complaining of left-side pain—pain below the ribs or in the flank. If the patient is a woman, I always suspect constipation. The only explanation I can give is that the pain is due to dragging on the descending colon or sigmoid. In a woman that is melancholic I always look for pain there and in the nape of the neck. I have always been skeptical of such a thing as nephralgia. I have seen a number of dyspeptics who suffer greatly with pain in the lumbar region, especially after excesses of any kind. In one case which I saw with Dr. Rogers he was satisfied there was a calculus, but frequent examinations of the urine revealed no pus, blood, or crystals. After a trip to the seashore and a course of tonics the patient entirely recovered. As a rule when they are made to stop work, put upon iron, arsenic, and strychnine and the diet regulated, the pain ceases.

The next case I wish to speak of is one of Graves' disease. I do not believe that Graves' disease is a disease of the nervous system at all, or that it has any thing to do with the sympathetic nervous system; I believe there is an excessive production of thyroid secretion producing the symptoms which we recognize as Graves' disease. It is the very

antithesis of myxedema, and the best thing to do is to check some of this secretion by removing a portion of the gland or by giving belladonna to diminish secretion. The influence of the thyroid secretion is a point worth considering; the increase of it producing Graves' disease; lack of it myxedema. Another point in this connection is the quick pulse sometimes observed in young girls with beginning phthisis. There may be in some of these cases enlargement of the bronchial glands or of the thyroid early enough to suggest Graves' disease. It suggests to me that the enlargement of the fingers seen in tuberculosis may not be due to malnutrition but perhaps to some perversion in the secretion of the bronchial glands.

LOUISVILLE.

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, May 15, 1896, Dr. W. L. Rodman, President, in the chair.

Presentation of Clinical Cases. Dr. W. L. Rodman: This case is presented, and I wish to invite a very free and full discussion. Eight or nine years ago the patient began to have epileptic fits, which have increased in severity and frequency since that time. His brother attributed the paroxysms to a blow on the head with a rock. I find a scar over the leg and arm center of the right side. After examining him and making pressure over the cicatrix he soon fell over in a fit. I do not believe, however, that had any thing to do with it. The brother had told me when a paroxysm came on his right leg flew up, then his right arm, and then the convulsions became general. I ordered the patient watched, and this statement was borne out by the nurse and several patients in the ward at the Kentucky Hospital.

A point that interests me is the fact that this scar, being in the situation it is (just over the leg and arm centers of the right side), the convulsions should begin on the same side. The case is certainly one of focal epilepsy; all the paroxysms begin in much in the same way—first in the right leg, then in the right arm, soon becoming general. Focal epilepsy is amenable to surgical treatment. The point in this case is to determine where to go into the head. The scar is on the wrong side

to account for the attacks. I have instructed the resident physician and nurses to watch the patient carefully in any other paroxysms; to observe the condition of the pupil and also to test his reflexes after the paroxysms.

Discussion. Dr. A. M. Cartledge: The history of the case so far as the injury is concerned does not throw much light upon the epileptic seizures. I do not think the injury to the head in this case is of any great importance in connection with the development of epilepsy. However, it may be. Most men who have had much to do with cerebral localization in attempting to determine the irritated points have come to the conclusion that in focal epilepsy the localization should be followed entirely independent of local lesions. I believe you have here a case of focal epilepsy. When once that is established, the question arises, where is the lesion that would give rise to such focal symptoms? I believe in going down on the point determined by the symptoms, ignoring every external evidence of injury.

It is possible that this man has a splinter of bone from a fracture of the inner table of the skull. But the fact remains that these convulsions come on in the right foot and arm, and I would attack the right foot and arm centers on the left side and ignore the wound on the right entirely.

Dr. William Bailey: In regard to localization I would say that Dr. Cartledge has expressed what I had in my own mind better than I could have done myself. If there is any thing in it, the true thing to be done is to go down upon the point that is responsible for the action of the right arm and leg. I would like to ask how a scar outside of the skull could be responsible for epilepsy unless the brain beneath that point was the seat of a lesion?

Dr. J. B. Marvin: I have serious doubts as to the benefits to be derived from surgery in a case like this. The epilepsy is of long standing, and the appearance of the patient suggests almost the imbecile. He has the typical facies of an epileptic. What good would be accomplished by taking out a button of bone even if you did find a splinter or an exostosis? In focal epilepsy the irritation is cortical it is true, but bear in mind this fact: that an epileptic paroxysm after it is repeated

it. Dr. Cartledge covered very nicely the ground of localization, and the points made by him are certainly correct.

Dr. Rodman (closing the discussion): I take about the same view of the subject as that taken by every one who has spoken. I was made to withhold surgery in this case at a time when the operation was promised at the clinic on account of the fact that I had not assured myself that the right arm and leg began to jerk first. I felt, if I operated at all, it should be on the side opposite to the scar. I do not believe the case to be traumatic epilepsy; or, if it is traumatic epilepsy, it was by center coup with a clot or some lesion on the opposite side and not on the side upon which he was struck. Statistics show that a very small per cent of these cases are permanently cured; a larger percentage are bettered, and a still larger percentage are not benefited at all. We know further that any operation upon the brain is very apt to cause amelioration in the symptoms for a short time; and therefore surgeons who wish to present very brilliant results after operations are usually prompt to show their cases before this habit which has been spoken of reasserts itself, and the patient becomes a victim to his usual seizures. But, recognizing the direful nature of epilepsy, its hopelessness under medical treatment and the not very great danger of going down the leg and arm centers, it is a question whether we ought to do trephining in a case of this kind. I told the brother that if any operation was done, it must be with the distinct understanding that there was danger in the operation itself, and that the prospects were that the patient would be bettered for one or two or perhaps three years; that the chances for complete relief were very slight, and that there was a possibility of no good coming of it at all.

In regard to Dr. Bailey's question, it is a fact that a painful cicatrix does bring on in a reflex way epileptic attacks. This was shown in a case of Briggs'. A man was brought to him with a depressed fracture of the skull of long standing; he also presented a necrosed tibia. Briggs conceived the idea that the trouble with the leg might be causing the epilepsy. He operated upon the leg. The patient was kept under observation five years, and during this time never had an attack of epilepsy.

Dr. Cartledge, showing the specimen: This case is one I reported

The man is fifty-three years of age and has been suffering pain for three years, and has had a slight discharge for one year. The tumor was between $4\frac{1}{2}$ and 5 inches above the anus, and had gone through the mucosa, invading the connective tissue beneath. It was about the size of a silver dollar, and a typical cylindrical epithelioma. The operation was a Kraske with certain modifications. There was a strip of healthy mucous membrane on the anterior surface, and it seemed to me if this could be saved and transplanted backward it would add something to the success of the operation. I did this very easily up to the peritoneum; then took out a broad wedge-shaped piece posteriorly, including in it all the malignant tissue, and taking up the narrow strip of rectal mucous membrane in front I carried it back. I closed up the site of the old rectum and made drainage through the perineum at that point. The outcome has been extremely satisfactory. The man has regained his lost flesh, and will have fair control over the bowel except in conditions of diarrhea. He is conscious in the morning that he is going to have an operation; has been wearing a pad, and gets along very nicely indeed.

It seems to me that the possibilities of this operation in hitherto inoperable cases are very great indeed. You can remove bone and get at malignant growths which could not be reached by any method in use heretofore.

In lieu of the essay Dr. J. B. Marvin made some remarks which he entitled "Neurological Fragments." [See page 12.]

Discussion. Dr. H. A. Cottell: I was very much interested in such parts of the discourse and discussion as I heard, and arise to say a few words about Graves' disease. When I was a student I wrote a thesis upon the subject of Bright's disease, and knowing that Alonzo Clark and Austin Flint stated that exophthalmic goitre was sometimes associated with Bright's disease, I supposed and stated that there might be some etiological connection between the two affections. Further, I saw in the hospital, a short time before I wrote my thesis, a case which seemed to confirm the statement. But I practiced medicine twenty-four years without encountering another such complication. Yesterday I saw my second case. The question arose in my mind as to whether the ophthalmos had preceded or was an accompaniment of the kidney disease.

The speaker's theory with reference to derangement of the bronchial glands causing clubbed fingers is quite plausible, and I hope it will be

further investigated. The bronchial glands are prone to be affected by foreign substances coming to them through the pulmonary and pleural lymphatics. We know that tubercle bacilli may find a ready nidus for proliferation in these glands, and it is by no means improbable that their derangement may affect the nail matrix, as degeneration of the thyroid affects the subcutaneous connective tissue.

Dr. F. C. Simpson: I recently had a patient in my charge which some of the members of this Society saw in consultation. The patient had slight fever and paroxysms of acute pain four or five times in twenty-four hours. She was taking $1\frac{1}{4}$ grains of morphine every day, but ceased taking it at once. I could not discover any cause for the pain, and believe it was simply a neurotic case. What struck me as most remarkable was her sudden leaving of the morphia.

Dr. S. G. Dabney: I would say a word about the second case reported by Dr. Marvin, the subject of which came to me with violent headaches. At that time I saw her mother, and she was in the condition described by Dr. Marvin.

In regard to Graves' disease, a case to the point comes to my mind. A young lady twenty to twenty-five years of age consulted me with slight protrusion of the left eye only. She has the so-called Graefe symptom—lagging of the upper lid—and a very marked retraction of the lid in the socket. She had previously been subject to thyroid enlargement which would come and go, being most marked at the menstrual period. She complains of supraorbital headache, but examination of the eyes shows no ocular defect. I think it probable, from the rapid action of the heart, the slight exophthalmos, and the previous enlargement of the thyroid, that it is a case of Graves' disease.

Dr. F. C. Wilson: Dr. Marvin's reports cover so large a field that it is difficult to discuss them. A possible source of abdominal pain in the cases cited by the speaker would be floating kidney, and it is one, I think, that is frequently overlooked. I remember a remarkable case of this kind in a young girl who for several years had suffered with recurring pain, generally after some sudden exertion. On examination I could distinctly feel the tumor, which could be replaced, and upon being replaced the pain subsided. She has had no return of the pain since the tumor was reduced six months ago.

The relation between the bronchial glands and thyroid disease would prove a very interesting study. I have seen a great deal of disease of the bronchial glands, and am surprised at the meagerness of

the literature upon the subject. Hardly a clinic passes without a case of paroxysmal cough being presented without any evidence of tuberculosis being elicited, but in which a careful examination of the root of the lung shows enlargement of these glands. The cause of the enlargement has always interested me; I have looked upon it as infection through the lymphatics of the lung and pleura.

Dr. Marvin (closing the discussion): Dr. Dabney's case I think is a typical Graves' disease. In regard to Dr. Simpson's case, the case I reported was afebrile. I would be more cautious if there was fever. It is perfectly possible, however, that in a nervous case there should be fever. I limited my remarks to left-side pain. Floating kidney is much more frequent on the right side, and the pain is not so sharp and continuous. It consists in more of a sickening sensation on manipulation.

Another point which was not brought out very fully by the two gentlemen who touched upon it is the influence of the bronchial glands. We have been taught that in certain cases of tuberculosis we would find clubbed fingers, enlargement of the toes and alterations in the bony structures, and because of these the thought suggested itself to my mind that these changes are produced by the bronchial glands pouring in or keeping out of the circulation certain substances which influence positively or negatively the nutrition of these distant organs.

Reports of Cases. Dr. Cottell: I delivered last Saturday evening a healthy young woman of a male child. The labor was normal. On the second day the nurse called my attention to an eruption that looked like measles. In twenty-four hours the eruption had disappeared. What was it? At the last meeting I reported the case of a woman delivered during the eruptive stages of measles, and was told to look out for an eruption in the child, but no eruption has appeared.

Dr. J. A. Larrabee: In regard to the exanthem in the newborn, I do not suppose there is any thing more fugacious than these innominate rashes. They have no etiology, and yet they bother us in infants of less than a year. I suppose rashes like that reported by Dr. Cottell are due to the effort to establish circulation. Most infants if watched carefully during the first ten days of life would show some of these rashes.

Dr. Cottell: Dr. Larrabee's theory is quite plausible. This child showed some venous stasis at birth.

JOHN L. HOWARD, M. D., *Secretary.*

Abstracts and Selections.

BERI-BERI IN THE FIJI ISLANDS.—A valuable contribution to the natural history of beri-beri is contained in the recently issued official reports on an outbreak of the disease which occurred in the year 1894 in the British colony of Fiji. All the patients were Japanese coolies, of whom about three hundred were imported for the purpose of working on sugar plantations. Their ages varied from eighteen to thirty years, and they arrived in the colony on April 27, 1894. It was understood that they were all medically examined in Japan, and on landing in Fiji they were, with few exceptions, a fine body of men; but during the first month of their employment, which was chiefly cane-cutting and draining newly-cleared land, there was a good deal of sickness among them, mostly malarial fever and diarrhea.

The first hospital case of beri-beri was admitted on May 30th; in the month of July at least seventeen of the men complained that they were suffering from kakke, the ordinary name for beri-beri in Japan, where it is well known to be endemic; and in the middle of November there were more than two hundred and twenty cases. There were in all two hundred and sixty-eight Japanese known to be attacked, of whom sixty-five died, and in February, 1895, the whole of the survivors were sent back to Japan.

The disease was entirely confined to these immigrants, not spreading either to the Indian laborers who worked on the same plantations with them or to the Fijian inhabitants of the villages. The Japanese were lodged in well-ventilated houses, all of which (with one exception) were constructed of wood and were spacious enough to allow at least three hundred and thirty cubic feet to each occupant. After their departure these buildings as well as the hospitals were washed with a solution of corrosive sublimate of the strength of one in one thousand, to which strong hydrochloric acid was added. Two days later the buildings were well washed with hot water and soap and left open for a week, after which the washings with corrosive sublimate and soap and water were repeated. They were then occupied by Indian coolies, among whom no cases of beri-beri appeared during the eleven months that elapsed up to the date of the report.

The colonial medical officers devoted much attention to the relations existing between beri-beri as it appeared in this epidemic and other diseases which either simulate it or have passed under the same name. They conclude that it is independent of scurvy, pernicious anemia, or ankylostomiasis, and that it is a specific neuritis affecting the motor and sensory nerves, peripheral at first, but afterward involving muscles and vital organs supplied by the sympathetic system. It causes death either by paralyzing the heart and respiratory muscles or by choking the lungs and other viscera

with the edematous effusion to which, in one class of cases, it gives rise. The most usual preliminary symptoms were a feeling of heaviness and weariness in the legs, numbness of the calf muscles, slight edema over the crest and inner surface of the tibia, loss of appetite, giddiness, headache, shortness of breath, palpitation, rapid pulse, and digestive disorders. With respect to the motor paralyses, the calf muscles were generally first affected then the peronei and the flexors of the feet and toes. The muscles of the hands and fingers were usually the next group affected. As a rule the patellar reflex was early impaired, and with the progress of the disease wholly suppressed. Some cases, however, with well-marked motor impairment exhibited good patellar reflexes and in some the reflex was exaggerated. Cutaneous anesthesia was constantly present over the calves, the ankles and the dorsa of the feet, accompanied by pain in the deeper parts when firm pressure was made. In a few cases very small rod-shaped bodies were observed in the blood, but cultivation experiments were unsuccessful.—*Boston Medical and Surgical Journal.*

TREATMENT OF GASTRIC ULCER COMPLICATED BY HEMORRHAGE.—The patient should assume the recumbent posture, with complete rest, not leaving his bed for any purpose, and the stomach should, so far as possible, be immobilized. Complete abstinence by the mouth should be observed, not even ice being permitted. An ice-bag or cold compress may be applied to the epigastrium with advantage. Should the bleeding persist, a syringe-ful of the following solution should be injected beneath the skin over the region of the stomach:

R Dialized extract of ergot, 15 grains;
Distilled water, 75 minims;
Carbolic acid 1½ grains.

Nourishment is to be withheld even by the rectum. If the patient is debilitated, or the nutritive condition is alarming, recourse may had to an enema of the following constitution:

R Milk, 8 ounces;
Yolk of egg, number 2;
Sodium chloride, a teaspoonful;
Red wine, a tablespoonful;
Starch, a tablespoonful.

This is to be warmed and injected slowly twice or thrice daily after a lavement of water. To overcome pain codein hydrochlorate or phosphate may be employed in dose of from $\frac{1}{2}$ to $\frac{3}{4}$ grain. If constipation demand intervention, enemata of soapsuds, glycerine, olive oil, or castor oil may be employed. The patient remains abed for about a week thereafter, the diet consisting of milk and lime-water, or milk with a little tea or coffee, beef tea, bouillon, peptones, meat solution, emulsions of the white or the yolk of egg, carbonated waters; but excluding cocoa, chocolate, and wine. In the second week following the hemorrhage, eight ounces of hot Carlsbad

water are to be administered night and morning, with from a dram to an ounce of Carlsbad salts. Warm compresses are to be kept applied to the abdomen to the point of producing redness of the skin.—*Journal de Médecine de Paris; Medical News.*

THYROID TREATMENT OF BRONCHOCELE.—Bruns (*Berl. klin. Woch.*, 1896, p. 406,) says that purely cystic bronchocele is not benefited, and in Basedow's disease it is the exception for the goitre to diminish, and the rule for the cardiac and nervous systems to grow worse under the administration of thyroid preparations. Nevertheless, there is an extensive field in bronchocele for the application of this treatment, which, excluding the above forms of tumors, the author has tried in three hundred and fifty cases. He at first gives the fresh glands, and afterward the English tablets, limiting the dose to half of an entire tablet per day for a child, or not more than two for an adult. Complications were hardly ever caused by these small doses; in three cases only was the heart too sensitive to bear them. Baumann's thyro-iodine, tried in twenty-four cases, did not seem to act so well. About three fourths of the cases were improved, the tumor and the troubles due to it diminishing. The retrogression of the tumor was complete in a few cases (8 per cent), but in about one third it was reduced to an inconsiderate remnant, and caused no trouble; in another third the diminution was not great. The age of the patient is important; the results best in childhood are less good in each succeeding decade. The age of the tumor is also important, since time brings degeneration and regressive changes; the shorter the existence of the tumor, the sooner its reduction. The diminution in size is soon appreciable—in from four to six days—and soon over; in sixty per cent in a fortnight; in forty per cent more, three or four weeks. Though only the simple hyperplastic form of goitre is amenable to thyroid treatment, the results are swift and sure in proper cases. The involution affects exclusively the hyperplastic tissue enveloping and binding together the nodes. When the persistent swelling is small the result approaches a complete cure, but any—even a moderate—diminution sufficient to relieve or remove the symptoms of pressure is of extraordinary benefit. In more than three quarters of the cases the growth recommences from one to two, or occasionally three or four months after the treatment is omitted, but such relapses can be prevented by continuing to give small doses of the thyroid.—*British Medical Journal.*

THE PATHOLOGY OF ADDISON'S DISEASE.—While the pathology of the symptom-complex covered by the designation Addison's disease is yet involved in obscurity, there is growing reason to believe that the disorder is dependent upon disease of the suprarenal bodies—in some instances of an obvious nature, in others beyond our powers of observation. Further, in a certain proportion of cases changes in the suprarenal bodies are found in the absence of recognized symptoms of Addison's disease. Among the

problems, therefore, awaiting solution at the hands of the pathologist are the extent and nature of the suprarenal disease necessary for the development of symptoms, on the one hand, and the ability of other organs to replace the function of the suprarenal bodies, whatever this may be, on the other.

Occasionally the suprarenal bodies fail to attain their normal degree of development; rarely they are entirely wanting. These conditions are usually associated with other developmental deficiencies, more especially anencephaly and hemicephal; but as a rule they are not attended with symptoms of Addison's disease.

Hansemann, in *Berliner klinische Wochenschrift*, 1896, No. 296, has reported a case of Addison's disease in which the essential lesion consisted in what was believed to be aplasia of the cortex of the suprarenal bodies. The patient was a man, thirty years old, who presented profound weakness, in addition to impaired nutrition and slight jaundice. He had conspicuously dark hair and almost black irides, so that the swarthiness of his complexion was not especially noticeable. The scrotem and mamillary areolæ, however, presented distinct pigmentation; so also did some old scratch-marks and the remains of former acnepustules. The palate, too, presented a line and a spot of discoloration. The patient grew weaker and weaker, and in a short time succumbed. Upon *post-mortem* examination the heart was found to be in a state of brown atrophy. At the apex of the left lung was a small slate-colored cicatrix, together with several small cheesy areas. In the intestines the follicles were swollen and the mucosa swollen and reddened in spots, with a number of hemorrhages. The suprarenal bodies were adherent to the surrounding structures. In their superficial extent they were of about normal size; the right was perhaps undersized. Conspicuous, however, was the reduction in thickness. On section no trace of cortex could be found. The whole gland was represented by reticular structure, containing large cells with pigment. In places a slight degree of small-cell infiltration was visible. Nowhere was there any considerable new formation of fibrous tissue, and no noteworthy alterations were detected in the nervous system.—*Medical News*.

ACUTE YELLOW ATROPHY.—Meder, working under the direction of Marchand, at Marburg, gives (*Ziegler's Beiträge*, Bd. xvii, p. 142-205,) the results of an investigation of five cases of acute yellow atrophy. The first patient was a boy, aged fifteen years, in whom the liver condition was preceded by severe osteomyelitis of the tibia. He died in a fortnight. The acini of the liver were only in part recognizable; the organ was dark yellow, and the consistency greatly diminished. The liver cells in the center of the acini close to the vein were least affected, but often had two or three nuclei. The further one examined away from the center of the acinus the fewer and more ill-defined the liver cells, while at the periphery they only formed irregular homogeneous masses greatly infiltrated with fat. Many

fusiform polygonal or spindle-shaped cells, smaller than liver cells, and having a large round or ellipsoidal nuclei were found, especially in the peripheral portion of the lobule. The second patient was aged twenty-eight, and very similar microscopic conditions were found. The third case occurred during an epidemic of jaundice that attacked fifty soldiers. The fourth case (man, aged twenty-six) commenced as gastritis. The fifth occurred in a woman, aged twenty-eight years, during lactation. In all the cases there was more or less proliferation of the cells lining the bile papillaries, so that in the lobules, in many cases, the bile capillaries consisted of solid processes of cells. Meder regards it as probable that the causes of acute yellow atrophy are many, but considers it as not admitting of doubt that the chief causes are the infective agents and their metabolic products.—*British Medical Journal*.

THE TREATMENT OF PUERPERAL SEPSIS.—Dr. H. T. Machell, of Toronto, read a paper (Ontario Medical Association) on this subject. An early diagnosis of sepsis, he said, was essential to timely treatment. He emphasized *uterine tenderness* as a danger signal which should always be heeded when it followed labor. Continued elevation of temperature should never be disregarded during the puerperium. Offensive lochia was a symptom that occurred too late to be of practical value. The treatment of puerperal sepsis is mainly local. He relied upon exploration with the aseptic finger, intra-uterine douches, curetting, and light packing of uterus with iodoform gauze. He was of opinion that in nearly all cases of sepsis the infection is conveyed to the genital tract by the attending physician or nurse. An unrepaired perineum was often the seat of septic absorption.

Dr. Albert A. McDonald, of Toronto, thought that the physician was too frequently assumed to be responsible for the occurrence of puerperal sepsis. He does not employ routine douches before or after labor, except in hospital and other cases that are uncleanly in their habits. He always employs the intra-uterine douche *before* curetting, and preferred an irrigating curette.

Dr. Hanniston, of Cleveland, said that accoucheurs and other attendants were often unjustly held to have conveyed septic infection to patients when, not uncommonly, the source of infection was incidental to patients themselves. A unilateral pus tube, for example, may complicate pregnancy and set up sepsis after labor. He thought immediate repair of a lacerated perineum should be *legally* incumbent upon a practitioner; while immediate repair of a lacerated cervix should be effected where it is at all practicable. He believed some of the most fatal cases of puerperal sepsis were due to lymphatic infection originating at the site of cervical laceration. In those cases uterine tenderness and other usual symptoms were often wanting. Dr. Bray, of Chatham, here asked the speaker whether it might not be difficult always to know whether the cervix was lacerated, especially in minor lacerations. Dr. Hanniston replied that if the uterus was well contracted,

a flow of red or arterial blood might safely be assumed to come from a laceration of the cervix.

Dr. Welford, of Woodstock, said that a short time ago he did an ovariectomy on a patient five months pregnant. Five days afterward premature labor occurred, and on the eighth day he found his patient with a temperature of 103°. He at once employed local irrigation and curetting, and in eighteen hours the temperature was normal, and so continued during convalescence.

Dr. Machell, in closing the discussion, said in reply to Dr. Hanniston that he had found lacerations of the vagina, and pocketing incidental to imperfectly repaired perinei, a more frequent and mischievous source of puerperal sepsis than lacerated cervixes.—*American Medico-Surgical Bulletin.*

THE SURGICAL TREATMENT OF PERFORATING GASTRIC ULCER.—Weir and Foot (Medical News, April 25th,) discuss the surgical treatment of round ulcer of the stomach and its sequela, and give an account of a case successfully treated by laparotomy. The patient was a girl aged seventeen, who had frequently been troubled with indigestion, and at various times had vomited her food. On November 27th, of last year, after severe gastric pain, which had lasted about a week, she was attacked with intense colicky pain over the stomach and vomited some coffee, which was the only nourishment she had taken that day. The diagnosis of perforating ulcer was made and laparotomy performed by Weir. A median incision four and a half inches long having been made in the median line of the anterior abdominal wall above the umbilicus, a minute opening, lying in the centre of a dense ring of fibrinous tissue, was found on the anterior wall of the stomach, about midway between the greater and lesser curvatures, and about one third of the distance from the pyloric to the cardiac orifice. In separating the stomach from the liver some thin, greenish fluid, containing a few flakes of curdled milk, escaped. No traces of food or gastric fluid were found elsewhere. Two silk sutures were first inserted through the wall of the stomach, across the perforation, to stop the escape of gastric contents, and then the perforation was carefully closed in layers, by sutures of fine black silk. About twelve peritoneal sutures were used. Abdominal irrigation was not employed, as the cavity did not contain any inflammatory or effused fluid and there were no signs of general peritonitis. The operation lasted one hour. For two days there was distressing vomiting. After the second day this subsided. Fluid nourishment was given on the third day. Recovery was uneventful. A brief record is given of a second case treated by Weir, in which the result was fatal. The diagnosis in this case, it is stated, was obscure, and the interval between the attack and the operation unduly prolonged. An analysis is given of seventy-eight records of cases of gastric ulcer treated by laparotomy, in twenty-three of which the operation proved successful. In the fifty-five fatal cases the mortality was 39 per cent where the time that had elapsed between the first symptoms of perforation and

the operation had been under twelve hours; 76 per cent when this had been over twelve and under twenty-four hours, and 87 per cent after an interval of more than twenty-four hours. In some general remarks on the treatment of perforating ulcer of the stomach the authors state that in cases of suspected, but still doubtful perforation, nothing should be given by the mouth. Lavage should not be resorted to, lest rupture of a weakened stomach and extravasation occur. In doubtful cases the patient should be kept quiet and in a horizontal position. In laparotomy the incision is best made in the median line, and should be from three to five inches long. The liver should be lifted up by the hand of an assistant or by broad retractors, and the stomach gently drawn downward and to either side. Gentle squeezing of the organ will often expose the perforation by the escape of gas or fluid. If nothing can be seen on the anterior surface the lesser omentum may be torn through at a thin place near the stomach and the posterior wall explored. If any recent adhesions exist about the perforation it would be well to separate them after protecting, as far as possible, the adjacent parts by gauze or sponges. It is held that excision of the ulcerated portion of stomach is unnecessary, that it takes up valuable time, that it makes a larger opening which may be difficult to close, and that hemorrhage follows, which is often troublesome to check. Lavage through the perforation is inadvisable, but after closure of the ulcer, is useful, as it serves to test the security of the stitches. It is held to be a safe rule not to irrigate the peritoneal cavity if the amount of fluid found during the operation be small. If, on the other hand, much fluid has escaped and the peritoneum has been extensively involved, the best chance for the patient lies in using large quantities of hot fluid, so as to cleanse every part of this membrane. For this purpose sterilized salt solution is advisable, and special drainage posteriorly on both sides and in the pelvis should be resorted to.—*British Medical Journal*.

TRAUMATIC LESION OF THE CERVICAL SYMPATHETIC.—Jacobssohn (*Neurol. Centralbl.*) reports the case of a child, aged one and three fourth years, in whom the cervical sympathetic was damaged during the scraping of an abscess cavity. Immediately after the operation the mother noticed that the left eye was smaller than the right, and that the left side of the face was paler and colder than the other, and did not sweat even when the right side was sweating profusely. When examined three months later the left palpebral fissure was smaller than the right, the left eye appeared sunken, the pupil only half the size of the right, and there was slight conjunctivitis of the left eye. The whole of the left side of the face seemed somewhat shrunken, and sensation seemed slightly impaired on this side. The symptoms previously noted by the mother were still present. The position of the abscess, which was glandular, and the absence of alteration of the heart's action would seem to point to damage of the superior cervical ganglion. The vaso-dilator fibers alone were involved, the vaso-constrictor

fibers escaping; the contraction of the pupil and of the vessels may thus be considered to be due to overaction of opposing muscles. The impairment of sensation was probably due rather to the altered blood supply and lowered temperature of the skin than to any direct lesion of sensory nerves.—*Boston Medical Journal*.

PUERPERAL SUPPURATION OF PAROVARIAN CYST.—Mouret (*Archives de Gynéc d' Obstét.*, January, 1896,) relates a somewhat desperate case brought to a safe conclusion. The patient was twenty, and was delivered of her first child on December 31, 1894. All went well till January 15th, when a rigor occurred. By the 21st there were all the symptoms of acute peritonitis. The patient's mother had a whitlow, and insisted on nursing her during the confinement. The patient became very ill; a tumor developed, and on February 25th a violent rigor with rise of temperature to 104° occurred, so that Hamonic was called in to operate. The tumor adhered firmly to the parietes. It was opened without separation of adhesions; eight and one-half pints of clear yellow fluid and two and one-half pints of pus escaped, and much semi-solid pus was cleared away. The inner wall was then washed with sublimate. The base of the cyst—right broad ligament—was so firmly adherent to the cecum, uterus, and bladder that the edges of the inseparable part of the tumor were sewn to the abdominal wound. On March 7th—ten days after the operation—the patient had severe headache, Cheyne-Stokes respiration, pulse 150; uneven pupils, diplopia, and strabismus, hallucinations, delirium, vomiting, and albuminuria. The muscles of the back of the neck were rigid. The temperature was 104° . After appropriate treatment, the patient slowly recovered—not without several untoward complications, including lymphangitis of the right thigh, with abscess (opened March 28th). By April 16th she was fairly well. Albumin did not entirely disappear from the urine till May 5th.—*British Medical Journal*.

THE EFFECTS OF LAPAROTOMY ON TUBERCULOUS PERITONITIS.—Gatti (*Suppl. al Policlinico*, March 28th) has experimented on dogs, guinea-pigs, and rabbits with regard to this point. Laparotomy has little effect when the tuberculosis is quite initial. In the first three to five days after operation the tuberculosis presents no macroscopic changes, but a small quantity of reddish serum is thrown out. From seven days to nearly a month the tubercle was almost always increased in amount, but after this diminution and disappearance was noticed. Cure occurs through a degeneration of the epithelioid cells, without the intervention of wandering cells, independently of phagocytosis, and without the formation of fresh connective tissue. In the author's view the factor which stimulates these repressive processes after laparotomy is the serous fluid which is thrown out in the first few days, bathing the tuberculous mass however thick, and having a bactericidal and attenuating action on the tubercle bacilli.—*Ibid*.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ.*"

Vol. 22.

SATURDAY, JULY 11, 1896.

No. 1.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

Subscriptions and advertisements received, specimen copies and bound volumes for sale by the undersigned, to whom remittances may be sent by postal money order, bank check, or registered letter. Address

JOHN P. MORTON & COMPANY, Louisville, Ky.

THE ANTI-VIVISECTION BILL OF THE DISTRICT OF COLUMBIA.

The Medical Record of the 20th ult. devotes a characteristic leader to this measure, about which perhaps enough has been written and said of late. Quite enough, we take it, has been said, but by no means not enough done; since the anti-vivisectionists are pushing their cause by every means, legitimate and illegitimate, in their power.

They have written, they have declaimed, they have interceded, they have memorialized, they have threatened, they have pleaded, they have boycotted, they have done all that intemperate zeal backed by mistaken notions of cruelty and short-sighted philanthropy could do, and now they are going to legislate with apparently the chances of success in their favor.

Of the strength and subtlety of these would-be protectors of the defenseless, the Record says:

So far as has been learned, the United States Senate is committed in its favor, and there will be a struggle in the House the coming autumn to secure its passage. The influences behind it are all-powerful, and although it is nominally backed by the Humane Society of the District alone, the latter organization has the indorsement of the National Humane Society, with active working branches throughout the different States. The bill itself is ingeniously framed with the apparent intention of conceding every thing reasonable to experimental scientists, but is in reality intended to hamper

them in every possible way by the restrictions as to details of procedure in given cases, which are virtually under the supervision of laymen whose knowledge of requirements is naturally biased by preconceived notions of antagonism.

The editor says, further, that "the movement is founded almost entirely on the erroneous assumption that most if not all experimental work in the line of vivisection is founded on cruelty, and that parties interested in its development are necessarily brutal."

It would seem incredible that the medical profession, the genius of whose very existence is the relief of present suffering through merciful ministrations to the sick, and the forestallment of future ills through the beneficent offices of hygiene, should suffer the imputation of cruelty at the hands of people who imagine themselves to have reached the sunny heights of philanthropy and Christian benevolence.

It must be that the gentler-mooded and milder-mannered people of civilized England and America have been living beneath their privileges, and are ignorant of the great strides forward which medicine has taken in the half century now closing, and the means through which this advancement has been made. For surely opposition to any measure which tends to perfect the healing art is against the good of the human race, and must be founded in ignorance. And here, perhaps, the doctor is himself at fault, since it is his duty to instruct those who employ him in the simpler things which pertain to the hygiene of the race.

Enough has been written, perhaps, for the perusal of the leaders of this movement (who doubtless do not read it), but could not the public be so instructed through temperate public addresses and forcefully written tracts, that in good time any anti-vivisection bill would fail of support when made an issue in a popular election? There is clearly a duty here which the profession owes to society, and an opportunity for some telling missionary work; for so surely as experimentation upon animals is stopped, or so hampered by law as to be ineffective, so surely will the great sciences of medicine, surgery, and hygiene be seriously impeded in progress, if not brought to a standstill.

The duty of the physician in a political way is thus pointedly set forth by the editor. He says:

What concerns the profession now, however, is the means to the end of defeating the intentions of the advocates of the bill in question. Unless something more is done than appears to have been done already, Congress

may pass the bill, and it may be both too late for protest and past the time for prayer. There is no doubt that if this bill becomes a law it will be the basis of a similar law for every State. Every physician should in his individual and public capacity use every influence upon members of Congress to avoid the chance of trusting such vital scientific interests to the mere chances of a passing vote. When the bill comes before the House the friends of progressive science should be ready and in waiting.

Notes and Queries.

ANTI-VIVISECTION IN THE DISTRICT OF COLUMBIA.—We commend to the thoughtful attention of the readers of the Journal, Dr. H. P. Bowditch's able presentation of the question of vivisection and of the problems which have grown up around it, owing to the agitation of certain zealous but misguided individuals. Dr. Bowditch makes this question the subject of the annual address delivered last week before the Massachusetts Medical Society, and published in the last and present issues of the Journal.

In the closing days of the session the United States Senate—which did so much last winter to inspire law-abiding citizens with shame and contempt for a law-making body, and to bring into disrepute a branch of the government formerly regarded with honor and consideration—passed Senate Bill 1552, entitled “A bill for the further prevention of cruelty to animals in the District of Columbia.” This was done without heed to the protests and representations of men of special skill, of learning, of humanity, men of national reputations, memorializing the Senate as the official representatives of many of the foremost scientific associations of the country. On the other side, however, was Gallinger, Senator from New Hampshire, a man with a heart doubtless as good as silver, and a marvelously curious knowledge of science, as may be seen by reference to his remarks in the Senate on diphtheria antitoxin—still, a mighty man in this Senate and to be treated with “senatorial courtesy,” not only as member of the Committee on the District of Columbia, but also as chairman of the Committee on Pensions!

In the House of Representatives this bill was not acted on, and goes over to the next session, to come up probably in January. The value to the country at large, to farmers and stock-raisers, of the investigations of a

It is important that all medical and scientific societies or associations should memorialize the House of Representatives with reference to this Senate bill, and where action has been taken or may be taken, it is fully as important that certified statements of such action should be properly presented at the proper time in Washington. If secretaries of societies and associations will forward such statements to Dr. S. C. Busey, 1545 I Street, Washington, D. C., they will be duly cared for and used to the best advantage. Action should not be sacrificed to good intentions and postponed until it is too late.—*Boston Medical and Surgical Journal*.

DR. GOWERS ON EMPIRICAL THERAPEUTICS.—In a recent address Dr. Gowers, in speaking of the use of drugs, claimed that the best of our still-used remedies were empirical or chance discoveries:

"We smile at the popular herbal remedies. But it is to these that we owe the majority of our most useful drugs. I can not conceive a therapist surveying a list of the chief drugs on which we depend in our daily work—and do not depend in vain—without a sense of wonder and perhaps of humiliation. We disinfect our rooms with burning sulphur; and so men did before the time of Homer. We purge sometimes with rhubarb, especially when some subsequent astringent influence is desirable, and so did the old Arabians for the same special reason. The value of castor oil in its chief use was familiar, probably for ages, to the natives of the East and of the West Indies before it was made known in Europe by a physician from Antigua one hundred and fifty years ago. Aloes was employed in the same way long before the time of Dioscorides and Pliny. The knowledge of the influence of ergot in parturition we owe to the peasants of Germany, and the use of male fern for tapeworm goes back to the old Greeks and Romans. The employment of mercury in syphilis by inunction and fumigation, which our nineteenth-century therapists regard with such satisfaction, seems to go back to the time of the Crusades, and it is said that its use can be traced in Malabar as far back as the ninth century. Podophyllum as a purgative we owe to the North American Indians. If we go through the list of all the drugs on which we most rely, we find a similar story. Even in the case of those which are the latest additions to our resources, we find that, with very few exceptions, their use arose from what we must regard as pure empiricism. It was by accident that the local anesthetic influence of cocaine was discovered."—*Boston Medical and Surgical Journal*.

FOREIGN ASPIRANTS TO AMERICAN PRACTICE.—In his presidential address, delivered at the recent annual meeting of the National Confederation of State Medical Examining and Licensing Boards, Dr. William Warren Potter, of Buffalo, of the New York State Medical Examining and Licensing Board (*Journal of the American Medical Association*, May 16th), said:

"One of the difficult problems confronted is in dealing with foreigners. These men come to this country in large numbers without knowledge of

our language, where they are told that every thing is as free as air, hence they expect to be admitted to practice at once without let or hindrance. Finding a State examination necessary, they plead poverty and demand leniency because of their imperfect knowledge of the English tongue. The question presented may be formulated about as follows: 'Shall one rule be established for our own countrymen, and another less rigid for these strangers?' I trust not, and I hope the answer will be a unanimous negative. The injustice of such discrimination against our own citizens is too apparent to admit of argument. I would not make one rule for one class of candidates, and another for another class, but I would administer the laws with impartiality, governing all alike.

"If one of our fellow-citizens should present such examination papers to a foreign board as these men generally offer to most of ours, he would be denied even the semblance of a hearing. His application would be dismissed without ceremony. Let it be remembered in connection with this that the country is not suffering for the want of doctors, and can wait without material injury until these men shall master the English language and otherwise conform to our rules—until they can place themselves on the same footing in every respect with our own countrymen. When they present themselves in a clear identity, with a legal diploma properly authenticated, and take our examination successfully, then we will gladly issue to them licenses to practice, but they should be made to understand at once that they can obtain them in no other way. This question is attracting the attention of medical journals in different sections of the country and has lately been discussed by one in a most decided and uncompromising manner."

PSYCHIC EPILEPSY.—Dr. Albert Warren Ferris read a paper before the New York Academy of Medicine with this title. The theory of arterial spasm causing local cerebral anemia was a plausible one. Nothnagel placed the center between the lower portion of the pons and the upper portion of the medulla oblongata, as a result of experimental investigation. The less the arterial spasm, the less the complementary hyperemia of the other centers. Gowers rejects this theory, however, and concludes that the cortex of the cerebral hemispheres is the seat of the discharge. Neurologists, the speaker said, agree that there is an anatomical relation between epilepsy and insanity. Among the few cases of physical epilepsy reported had been included imperfect consciousness, dreamy states—in short, psychical disturbances preceding, displacing, or succeeding the convulsions. Instead of the fit, these people are thrown into fits, for example, of violent laughter or shouting. The following was one of several illustrative cases cited: A young man of twenty-one, with good family history, received a fall on his head when five years of age, and since that time had never fully regained his mental balance. A second fall on the head occurred when he was sixteen years old, and since then he had experienced severe headache

in the parietal region, near the seat of the scar. At times he would become maniacal, profane, and even violent. He had no clear recollection of what occurred during the attacks. It was interesting to note that this case, which was under observation of Dr. M. Allen Starr, had been cured by trephining over the original site of the injury to the head. Attacks of psychic epilepsy naturally assume much importance from a medico-legal standpoint. It was a hard task to decide whether an epileptic was responsible for crimes committed. It was well known that an epileptic would perform automatically very complex acts which had the appearance of volition. In order to form a proper judgment they should be kept for some time under the observation of a competent alienist.—*American Medico-Surgical Bulletin.*

THE ANATOMICAL NOMENCLATURE OF THE NERVOUS SYSTEM.—In accordance with the report of a committee on neuronymy, adopted unanimously by the American Neurological Association on June 5th, the following recommendations are promulgated: (1) That the adjectives *dorsal* and *ventral* be employed in place of "posterior" and "anterior," as commonly used in human anatomy, and in place of "upper" and "lower," as sometimes used in comparative anatomy. (2) That the cornua of the spinal cord and the spinal nerve roots be designated as *dorsal* and *ventral*, rather than as "posterior" and "anterior." (3) That the costiferous vertebræ be called *thoracic*, rather than "dorsal." (4) That, other things being equal, mononyms be preferred to polynoms. (5) That the "hippocampus minor" be called *calcar*; the "hippocampus major," *hippocampus*; the "pons Varolii," *pons*; the "insula Reilii," *insula*; the "pia mater" and "dura mater," respectively *pia* and *dura*. (6.) That the following be employed in place of their various synonyms: Mesencephalon, pallium, oliva, clava, operculum, fissura centralis, fissura calcarina, fissura collateralis, fissura hippocampi, cuneus, precuneus, claustrum, fornix, infundibulum, vermis, hypophysis, epiphysis, chiasma, oblongata, lemniscus, monticulus, tegmentum, pulvinar, falx, tentorium, thalamus, callosum, striatum, and dentatum.—*New York Medical Journal.*

THE INFLUENCE OF INFLUENZA ON PREGNANCY, LABOR, THE PUERPERIUM, AND THE FEMALE GENITALIA IN GENERAL.—G. Légeul, of Paris, endeavors to determine the relation between influenza and several complications of labor and the puerperal state. From a large number of personal observations he has drawn the following conclusions:

1. Women are not more disposed to take grippe than men except during the time of puberty, that is, between fourteen and twenty years.

5. Grippe can not produce endometritis, pelviperitonitis, inflammation of the adnexa, hematocele, and sometimes cystitis and nephritis.
6. It retards the growth of both benign and malignant neoplasms.
7. It shortens gestation if contracted late.
8. If contracted early it produces abortion.
9. Labor seems to be less energetic than otherwise, and the membranes often rupture early as the result of the coughing.
10. In some cases the disease has no influence upon the genitalia, although it may leave behind lesions of other organs.
11. Owing to suppuration in other organs grippe can simulate puerperal fever so that the differential diagnosis is very difficult or impossible.
12. New-born babies are seldom affected, and the course of the disease is usually mild. In exceptional cases the disease may prove fatal, owing to complications in the lungs.—*American Medico-Surgical Bulletin.*

HANGING, FASTING, AND BURIAL AS AN EXHIBITION.—In the *British Medical Journal* for May 16th a correspondent writes that there is at present in Paris an exhibition of a hanging and fasting man which attracts large crowds. A man named Durand is attached by a cord to the ceiling; he is dressed in a blouse, with a red muffler round his neck. His head is bent toward his chest. His face is thin and bony and appears convulsed, his eyes are almost shut, his veins are swollen, and the complexion is ashen. The arms drop down at a little distance from the body; his hands are contracted and his fingers are bent. The veins are so swollen that they seem on the point of bursting. The legs hang straight and stiff. This barbarous spectacle, says the writer, is served up with an accompaniment of music. It is observed that when the music strikes up the hanging man is seized with painful convulsions. In this position he will remain for thirteen days; after that trial he will remain buried for a year, and will then take his place among the living. The rest Durand takes in his hanging position consists in leaning against a ladder which is placed in a position to permit him to doze without in the least changing his attitude. During this time he is rubbed with a sedative lotion and inhales ether. No food of any kind is taken.—*New York Medical Journal.*

BACTERIOLOGICAL STUDY OF THE THROAT IN ONE HUNDRED AND SEVENTEEN CASES OF SCARLET FEVER.—The streptococcus is the only micro-organism which is constantly found in scarlet fever. In fifty-two observations upon the throat lesions of scarlet fever, both simple and complicated by other infections, such as measles and mumps, the streptococcus has been found in every instance, either alone or associated with other micro-organisms.

ning, a combined streptococcic and diphtheritic infection. This double infection is one of very great gravity. The association with the bacillus coli appears to be, in certain cases, the source of an infection as serious as that which results from the association with the bacillus of Löffler.

Finally the streptococcic origin of the throat lesions of scarlet fever does not appear to be peculiar to that disease, since the pharyngeal symptoms of scarlet fever appear to be of the same nature as those of a number of other throat lesions.—*G. Lemoine in Bull. Méd.*

INTUBATION.—Trumpp (*Münch med. Woch.*, April 28, 1896,) mentions that there is still some doubt as to the best method of taking out the tube after intubation, whether by means of a piece of attached thread or by the extractor. There are disadvantages attending the thread method, and especially because the fixing of the tube thus produced does not allow of its free play, and hence causes a liability to erosion of the parts. The use of the extractor, on the other hand, is hardly possible in private practice, as a sudden stoppage of the tube by membrane might lead to a danger of suffocation without the tube being able to be withdrawn at once. The use of the extractor may also require considerable skill, especially where a small tube sinks deeply into the larynx. In a case where attempts at extraction caused a small tube thus to sink further down the author adopted the following device: Pressure with the thumb was made on the trachea, just below the cricoid cartilage, where the end of the tube could be felt; the cough thus forced the tube out. The author has found that this method of expression never failed in the cases in which he subsequently tried it. The pressure may be made with both thumbs, the fingers finding support on the neck; the pressure should be made inward and directly upward. If a more powerful pressure is exerted the tube may not only be forced into the mouth but even completely out of it. The author has never seen any disadvantages attending this method. Of course the pressure should be made intelligently and not in too forcible a manner. *British Medical Journal.*

FIFTY CLINICAL OBSERVATIONS ON THE THERAPEUTIC VALUE OF ARISTOL.—Dr. Eriberto Aievoli (*Incurabili*, 1896; *Wiener klin. Rundschau*, May 31, 1896,) gives his experience in the use of aristol in fifty cases, mostly of suppurating wounds and varicose ulcers, but including some examples of suppurative adenitis, chilblains and boils. He used it in the form of an ointment of the strength of from four to ten per cent spread on sterilized gauze and applied to the affected part. He found it particularly efficacious in a number of cases of injury of the head; lacerated and contused wounds of the orbital border, such as often run a very tedious course, healed favorably and with striking rapidity, and in a comparatively short time the scar was hardly to be seen. In varicose ulcers of the feet the results were not quite so favorable, for the reason that most of the patients could not take the

necessary rest. Prompt action was seen in a case of ulcerating chilblains. The results were striking in burns. Stress is laid upon the ease with which the dressing is removed. The author thinks aristol of greater value than boric acid.—*N. Y. Med. Journal.*

ARTHRITIS IN CROUPOUS PNEUMONIA.—Vogelius (*Arch. de Méd. Expérimentale*, March, 1896,) draws attention to this somewhat uncommon complication of croupous pneumonia, and gives the history of two cases under his own observation. The first, a workman, aged thirty-eight, suffering from an ordinary croupous pneumonia, complained on the fifth day of pain about the middle of the right clavicle, followed by swelling, redness, and fluctuation at the right sternal clavicular articulation. On exploration the joint was found to contain sero-purulent fluid and yellow membranous flakes, and it was found that the sternal end of the clavicle was disorganized. Bacteriological examination of the fluid showed it to contain large numbers of diplococci. The second case was that of a painter, aged sixty, the subject of pneumonia, which was followed by a left empyema, with painful swelling of one hip-joint. This was also found to contain pus, and gave the same result on examination, large numbers of diplococci, apparently identical with the Fraenkel diplococcus. The author points out that suppurative arthritis is a rare complication of croupous pneumonia, but at the same time expresses the opinion that it may occur more frequently than is supposed, being looked upon as a rheumatic affection having no relation to the principal disease. Future bacteriological observations may probably result in the demonstration of the interdependence of the two conditions. These articular affections may declare themselves at different periods of the disease; sometimes when the fever attains its highest point, at others after the crisis. In one case it supervened before the beginning of the pneumonia, when the not unnatural diagnosis of acute articular rheumatism was made. In general only one joint is affected, and apparently those of the upper extremity are most liable. The synovial membrane is greatly injected, but the cartilages and bones are rarely affected, even when there is marked suppuration. The surrounding muscles are infiltrated and grayish-yellow in color, and large numbers of diplococci may be found in them. The effusion in the joint varies from serous to thick pus. Naturally this complication renders the prognosis graver, but in the case of recovery from pneumonia the prognosis so far as the joint is concerned is good.—*British Medical Journal.*

PROFESSOR PELLMANN, of Bonn University, Germany, has made a special study of hereditary drunkenness. He has taken certain individual

fessor Pellmann has immortalized thus in medical literature is Frau Ada Jurke. She was born in 1740, and she was a drunkard, a thief, and a tramp for the last forty years of her life, which ended in 1800. Her descendants numbered 834, of whom 709 have been traced in local records from youth to death by Professor Pellmann. Of the 709 he found 106 were born out of wedlock. There were 142 beggars, and 64 more who lived from charity. Of the women, 181 led disreputable lives. There were in this family 76 convicts, 7 of whom were sentenced for murder. In seventy-five years this one family rolled up a big bill of costs in almshouses, trial courts, prisons, and correctional institutions. Professor Pellmann says this bill, which the authorities of Germany and therefore the taxpayers have paid, has been at least 5,000,000 marks, or about \$1,250,000.—*Medical News*.

RUPTURE OF THE HEART.—Charou (*Archiv. de Neurol.*, April, 1896,) reports a case of spontaneous rupture of the heart in a lunatic. The patient, a woman, aged seventy-five years, had been in the asylum twelve years, and during the last five years of her life had become extremely obese, and passed from a previous condition of restlessness and excitement into a state of complete physical inertness. One morning she vomited, seemed giddy, and became cold; the heart sounds were noticed to be very feeble. For the next ten days the patient seemed weaker, but otherwise in her usual health. Then, just after an effort to raise herself in bed, she suddenly threw up her arms, screamed, and fell dead. The necropsy showed that the pericardium was filled with clotted blood, a thin layer of which on the heart seemed to be of older date than the rest. There was a rent the size of a shilling in the outer border of the right auricle. The heart was extremely fatty; the aortic valves were thick and rigid; the arteries were markedly atheromatous. The kidneys were normal. It seems probable that the syncopal symptoms ten days before death were due to a very minute rent in the auricle, allowing only slight hemorrhage into the pericardium, and that subsequently slight muscular effort enlarged the opening and so caused the sudden death.—*British Medical Journal*.

THE CORTICAL MECHANISM OF REFLEX PHENOMENA.—Physiologic and pathologic research have convinced Pändi that it is incorrect to regard the brain as the center of intelligence of the so-called lower centers (including the spinal cord), as opposed to being the seat of reflex phenomena. It seems to him sufficiently demonstrated that the reflex phenomena of the intact organism, the rapid as well as the slow, are all accomplished by means of the cortex cerebri. He could not find a single physical or clinical fact to show that the sub-cortical substance was able to produce a reflex movement or even a tonus without abnormal stimulus. After complete severance of cortical communication the lower means of communication then act vicariously, and substitute all the functions of the brain, the lowest as well as the most complicated, but of course these functions never attain as high a degree of perfection as the cerebral.—*Centralblatt f. Physiologie*.

ECZEMA OF THE MUCOUS MEMBRANE.—At a recent meeting of the Association pour l'avancement des sciences, a report of which appears in the *Gazette hebdomadaire de médecine et de chirurgie* for May 7th, M. Catois remarked that eczematous manifestations on the mucous membranes might give rise to errors in diagnosis and be confounded with angina, stomatitis, cystitis, urethritis, or acute balanoposthitis, etc. Eczema of a mucous membrane, he said, was generally characterized by the comparative rapidity of its appearance, and it was observed more frequently in men than in women. Acute eczema was rarely accompanied by manifestations on the mucous membranes, but this was not the case in the chronic forms of cutaneous eczema.—*New York Medical Journal*.

TREATMENT OF ATTACKS OF MIGRAINE.—1. Diminish the hyperesthesia of the painful area by a spray of some local anesthetic.

2. Immediately afterward practice compression of both temporal arteries, preferably by means of rings of cork held in place by a gauze bandage.

3. At intervals of two hours for four doses a cachet is given containing of

Antipyrin,	7½ grains;
Sparteïn sulphate,	⅓ grain;
Caffeïn citrate,	1½ grains.

4. If there is gastric derangement the foregoing combination may be administered by enema.—*Critzmänn, Press Médicale; Medical News*.

DR. HENLE, Professor of Anatomy at the University of Tübingen, died on May 23d. He was one of the best known of modern anatomists and recognized as one of the best authorities upon the subject. He was, in the early part of his career, assistant to the physiologist Donders, in Holland, and was afterward elected professor in the Universities of Marburg, Rostock, Prague, and Tübingen, respectively.

THE next meeting of the British Medical Association will convene at Carlisle on July 28th and continue four days. The address in Medicine is to be delivered by Sir Dyce Duckworth, M. D., LL. D., and that in surgery by Roderick Maclaren, M. D.

A DISPATCH from London is authority for the statement that the Sultan is suffering from a tumor of the spine. He has refused operation for its removal because his surgeons are unable to assure him that the procedure is not dangerous.

THE DEATH OF PROFESSOR GERMAIN SEE, OF PARIS, is announced as having taken place on the 12th of May. He was seventy-eight years old.

Special Notices.

SUMMER DIARRHEA.—In the large class of summer diarrheas of children and adults, with griping in the bowels and flatulence, the use of listerine in doses varying from ten drops to a teaspoonful (with or without water), has a most salutary and pleasing effect.

It can be administered at short intervals after eating, as soon as regurgitation, distension, or acidity occurs. Its action in arresting excessive fermentation is prompt; besides, it exercises a decided sedative influence on the mucous membranes of the stomach.

The Thymol, Menthol, and Boracic Acid which, with the quota of alcohol necessary to their proper admixture, form the principal elements of listerine, lend to this compound a special value in this class of cases.—*New York Medical Journal*.

IN fermentative disorders of the stomach, and in corresponding forms of diarrhea, we consider listerine certainly a safe and also a valuable preparation. It is not at all unpleasant to take when properly diluted; especially, then, as an internal antiseptic do we recommend its use. It is, however, largely used as an external antiseptic, and its oily constituents give it a more healing and penetrating power than is possessed by a purely mineral solution. As a toilet antiseptic to use after a post-mortem, or similar work, listerine, with its pleasant odor, need only to be tried to find a permanent place there. Listerine is a very attractive-looking preparation, the liquid being crystal clear, with no sediment or undissolved oils whatever. The Lambert Pharmacal Co. have introduced their product strictly through the profession, which attests their faith in its efficiency.—*Maritime Medical News, Halifax, N. S.*

THE ACTION OF LACTOPHENIN.—Senft (*Wiener Med. Presse*, 1896, No. 50). The author reports a large experience with this drug in the treatment of children. He has used it as an antipyretic in pneumonia, bronchitis, typhoid fever, and diphtheria. It reduces the temperature promptly, and he reports no untoward effect on the stomach or depressing effect on the heart. Because of the last named advantage he has substituted it largely for other antipyretics for children. To infants of one year he gives three fourths of a grain; at four years he gives one fifth of the adult dose.—*Archives of Pediatrics*, June, 1896.

IF YOU want standard chemicals, alkaloids, etc., such as atropine, codeine (pure phosphate, sulphate, etc.), chloral, eserine, resorcin, terpin, hydrate, etc.—specify *Boehringer's*.

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THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXII.

LOUISVILLE, KY., JULY 25, 1896.

No. 2.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

THE MEMBRANA LIMITANS.

BY BYRON ROBINSON, B. S., M. D.

The membrana limitans is a transparent, glassy, fibrillar-like membrane situated beneath the peritoneal endothelia. The earliest account of this membrane at command is a well-written article by Brinton, in Todd's Encyclopedia, 1847, under another name, "basement membrane." Todd and Bowman describe it as "a continuous transparent membrane of excessive tenuity and homogeneous or nearly so." Goodsir (1847) also described it, but he noted that it could be separated into its component cells, which were of a rhomboid and extremely flattened shape. Goodsir named it the "germinal membrane." Many examinations of this subject were made fifty years ago, with the result that vigorous denials of its existence were asserted. Brinton himself could not confirm Todd and Bowman's investigations. Arnold, in his "Hand-buch der Anatomie," Freiburg, 1844, p. 216, calls it "a finely granular, fiberless round substance." There can be no doubt that the basement membrane of Todd and Bowman and the granular fiberless substance of Arnold are one and the same membrane. In 1850 Kolliker, in his "Mikroskopische Anatomie," could not fully confirm the basement membrane, but acknowledged that beneath the endothelial layer there appeared a homogeneous element which was similar to a membrane. Henle, in 1840, "Über Seröse der Häute," in Froriep's "Notizen," demonstrated this membrane as intercellular substance of connective tissue,

and again as formless germinating material. Luschka, in 1851, in "Di Struktur der Serösen Häute des Menschen," calls it by various names as structureless connective material, almost completely homogeneous of glass-like transparency, smooth or very finely striped lamella. He says it is clear and shining and has the appearance of lightly ground glass. It may be noted that but little could be added to make Luschka's structureless material exactly the same as the differently termed membrana limitans of to-day. He says this structureless material is found in all the serous membranes between its fibrous elements. The famous Reichart, who in 1845 first proposed the term connective substance, considered this material intercellular substance, which is finally transformed into a membrane possessing rudiments of the original cellular elements. Luschka incidentally remarks that Todd and Bowman found occasion to call this structureless membrane the basement membrane.

In 1873 Bizzozero, who studied extensively the peritoneum, established the less distinctly seen object of older authors as a definitely recognized membrana limitans. However, it is the same identical membrane of Arnold, Henle, Todd and Bowman, Luschka, Reichart, Goodsir, Kolliker, and others. What brought Bizzozero into prominence is not reaffirming the existence of the membrana limitans, but the announcement that the membrana limitans is perforated by apertures on the diaphragmatic serosa. This significant discovery is the only explanation so far offered which explains why the finely divided, colored granules are so rapidly carried into the lymph channels of the diaphragmatic serosa when injected into the peritoneal cavity. The diaphragm is the chief region of absorption of the material injected into the peritoneum, because the membrana limitans is perforated only over the diaphragm.

The membrana limitans is a very fine, thin, connective tissue layer on which the endothelia rest. It is a finely granular, or better, a finely fibrillar or striped membrane. It contains no cells. It has a watery or glass-like transparency, which is plainly observed when the endothelia are fallen off or very lightly brushed off. As Bizzozero and Salvioli have shown, the membrane is not exactly alike over all parts of the peritoneum, but is perforated over the diaphragm. They say that the perforations of the membrana limitans are situated on the zona tendinea and zona peritendinea of the diaphragm. Bizzozero and Salvioli assert that the pores of the membrana limitans have a diameter from four to sixteen μ , and a round or oval circumference. They occur in group

of fifty to sixty, of irregular egg-shaped form ; the pores correspond to the meshes of the fibrous connective tissue. I have examined this glass-like membrane, the *membrana limitans* in various places of the peritoneum, as the diaphragm, omenta, *mesenterium ligamentum latum*, and there is no doubt about one's ability to see the membrane when the endothelial layers have been carefully brushed off, but we can not always be sure to find it, and it is not easy to isolate. Again, to find the pores of the *membrana limitans* which Bizzozero and Salvioli say exist only on the *zona tendinea* and *zona peritendinea* of the diaphragm is not at all easy, at least so far as my researches are concerned. It is rather to be said it is an uncertain process to find the pores. Muscatello made examinations of the *membrana limitans* on the *ligamentum latum* of the serous covering of the bowel, stomach, liver, spleen, pancreas, uterus, and anterior abdominal wall, and the diaphragm. He found that the *membrana limitans*, as Bizzozero and Salvioli had asserted, is perforated on the diaphragm. In no other place could he find pores in it. The method Bizzozero recommends to isolate the *membrana limitans* is to place large pieces of serous membrane several days in Muller's fluid and then twelve to twenty-four hours in equal parts of water and alcohol. Now the endothelia are brushed off with a pencil or washed off with a stream of water. One then tries to seize the membrane with a forceps so it may be isolated. The membrane is then spread out and colored with eosin or acid fuchsin, when one can examine it in glycerine and water. Muscatello notes, as all others who have examined the *membrana*, that it is of a fine fibrillar structure. It is a membrane of a continuous uninterrupted surface with no pores except at the diaphragm. In my examinations of the *membrana limitans* I will here record a phenomenon, which few authors note, and that is if the endothelia are brushed off very lightly, or better, washed off, one can occasionally observe small pits or depressions in the *membrana limitans*. These pits or depressions are simply the places where the endothelial cells once were.

The only other author mentioning the fact is Muscatello. The *membrana limitans* is generally thicker over solid organs, as the liver and uterus. However, one generally finds the membrane on the diaphragm with as much continuity as elsewhere. Still I found with Mus-

Again, in places it is so intimately associated with the underlying connective tissue that it can scarcely be separated, and a little strong penciling ruptures it in various directions.

The membrana limitans is a thin sheet of tissue, a continuous membrane on which rests the protoplasmic portions of the endothelial cells. According to Bizzozero, Salvioli, and Muscatello, it is perforated only on the diaphragmatic serosa, and hence arose the explanation of the fact that the diaphragm is the chief point of absorption of the peritoneum. The reason that the mesenterium will remain distended with air when blown up, as Bichat recorded it, is because the membrana limitans is not perforated on the mesenterium.

From considerable research and quite a number of experiments on the peritoneum of rabbits (and other animals) it appears that there is a stream directed toward the diaphragm.

So far it appears the diaphragmatic membrana limitans alone possesses pores, and is the only point of the peritoneum which possesses the power to absorb and deposit the colored granules into the subjacent lymph channels. Dubar, Remy, and Maffucci assert that there are other localities of the peritoneum for rapid absorption, but this has not been extensively confirmed. The strange reason for the diaphragmatic membrana limitans being the only portion perforated has received no adequate explanation so far. But the diaphragm is an organ of motion and a bed of lymphatics.

The significance of the perforation of the diaphragmatic membrana limitans and the stream of fluid in the abdominal cavity directed toward it is a practical matter in peritonitis, for it is very suggestive of drainage.

1. In my experiments on animals it was distinctly evident that the region of the diaphragm (including to some extent the omentum minus and root of the omentum majus), was the chief region of physiologic (and ultimate pathologic) activity. The swarms of leucocytes told the story. The particles of Berlin blue almost entirely passed into the vena lymph bed of the diaphragm and nowhere else. With time the particles pass into mesenteric glands and viscera, but this is entirely secondary to the passage into the lymph channels of the diaphragm.

2. It has been found that in puerperal peritonitis the serosa and lymph channels of the diaphragm are intensely inflamed as first demonstrated many years ago by Recklinghausen.

CHICAGO, ILLS.

GONORRHEA IN THE FEMALE AND ITS TREATMENT.*

BY J. C. CARRICK, M. D.

Our knowledge of gonorrhea in women is comparatively new. Excepting the studies of Bernutz practically all the advance on the subject dates from the paper of Noeggerath in 1873. Before this time no adequate conception of the disease existed, and especially its relations to endometritis, salpingitis, and sterility were not appreciated.

Fortunately for medicine and humanity, Noeggerath's radical position and apparently exaggerated views concerning the serious nature of the disease and its importance as a cause of pelvic inflammation and sterility, forced the subject upon the attention of the profession, and led to more careful investigations, so that to-day it may be said that our knowledge rests upon a satisfactory and scientific basis.

There are still many points which have yet to be cleared up, and several questions concerning it which perhaps may be solved in the future.

The statistics and investigations made by the gynecologist have been the chief means of enlarging and rendering more clearly our ideas upon this once most obscure and much neglected subject. We must also admit that the discovery of the gonococcus has been a very great help, and by its study we have been able to distinguish the inflammations produced by it from the simple formation of muco-purulent inflammation due to other causes.

In early days the free escape of very green pus from the uterus and vagina was considered evidence of gonorrheal infection, and the clear gelatin mucoid discharge from the parts was regarded as evidence of simple non-infectious process. To-day, in the light of our more extended and precise knowledge, we find that the pus secretions may be harmless, while infection may lurk in the seemingly innocent mucous discharge.

Gonorrhea in the female is unlike that in the man; so characterized by the fact that it possesses a much more marked tendency to run rapidly through the acute stage and pass into a chronic stage. (And it is certainly much less frequent in the female.) Another circumstance must be considered, the mild course of gonorrhea, and especially the feeling of modesty, which is pronounced even in the lowest classes among women, constitute the motives for concealing genital affections

* Read at the June meeting of the Kentucky State Medical Society, 1896.

as long as possible, and thus the acute stage of gonorrhea of the female sexual organs often escapes the notice of the physician, and only the latter and graver consequences which no longer bear the stamp of disease come under observation. Hence the disease in the female is often overlooked. Then, again, in some cases it progressively invades the genital tract. Becoming lodged in the cervix uteri it may extend to the body of that organ, attack the tubes and ovaries and then the peritoneum. Patients thus affected are usually sterile, they suffer intense discomfort and pain, and their health is impaired until they become mental and physical wrecks. These sad results certainly do occur in quite a large number of cases. Instances are not infrequent in which wives are infected with gonorrhea by their husbands, who perhaps regarded themselves as cured.

It is very difficult and even impossible to get reliable statistics as to the frequency of the occurrence of acute gonorrhea in women. It exists largely in prostitutes and those of the lower walks of life, and is not uncommon in shop girls and others who for various reasons leave their homes and cease to be under their family restraints.

A more recent investigation proves that in women over twenty years of age the urethra and cervix uteri are most frequently affected by gonorrhea; also the vulva sometimes becomes infected, but this is not very common. It is most frequently met with in young girls, usually the result of their first infection and in their early attempts at intercourse. The existence of gonorrheal vaginitis has been denied by some, but there can be no doubt that in a restricted number of cases gonorrhea primarily attacks the vagina. It is also not infrequently secondarily infected by the gonorrheal secretions from the os uteri. Gonorrhea in women as well as in men consists of an exudative inflammation of the submucous connective tissue, and the genital organs in women are so extensive, complex, and involuted, and so profusely supplied by blood-vessels which frequently undergo abnormal engorgement, that it can readily be understood why the morbid process may show a tendency to become chronic.

You are well aware that gonorrhea presents a very considerable gravity. The great number of orifices and glands about the vagina and urethra make a good hiding-place for the gonococcus to locate and multiply in. The communications with peritoneal cavity by means of the uterus and tubes from the external genital organs expose the patient to extremely serious complications. When you are consulted for

trouble you suppose to be gonorrhea, you should make a most careful examination in order to determine the parts that are infected, for if you intend instituting antiseptic treatment, your antisepsis must be complete or else you should not undertake it. To overlook the treatment of an orifice is to put yourself in the unhappy position of seeing all those you have treated reinfected by the remaining neglected focus.

Your treatment should be carefully begun in this matter: Firstly, disinfection of the urethra and periurethral glands; secondly, disinfection of Bartholin's glands; thirdly, disinfection of the vagina and uterus. The symptoms of gonorrheal urethritis are well known to you. They are practically the same in women as in men, with the exception of much less intensity and general reaction in the former.

Gonorrheal Urethritis. In the acute stage the treatment is hygienic and symptomatic. As regards exercise, food, and drink, it is the same as in the male. Internally I administer citrate of potash to render the urine alkaline. Locally I apply every day a solution of nitrate silver, ten grains to the fluid ounce. The injections are made when the bladder is moderately full. This is best made through a very slender urethral speculum or ordinary clap syringe. After the urethritis has somewhat subsided the local applications may be reduced in strength to five grains to the fluid ounce and made less frequently.

Gonorrheal Vulvitis. Wash the parts with lukewarm water, and then apply nitrate of silver to every fold of the vulva, the strength about ten to twenty grains to fluid ounce, and allow it to dry on the surface. This should be done every day, packing the vagina with iodoform gauze. This is a preventive against extension.

Gonorrheal Vaginitis. The treatment which is best carried out under the control of the eye is always the most effective. It is therefore best to introduce a speculum, carefully cleanse the vaginal mucous membrane with a tampon brush, and then apply the medicament with a swab of cotton; every part of the vaginal mucous membrane is painted with nitrate of silver, twenty or thirty grains to the fluid ounce. The vagina is then packed with iodoform gauze as before. These remedies are applied every third day and are recommended particularly in sub-acute cases.

Gonorrheal Endometritis. As soon as your diagnosis is made the woman should be operated upon. The cervix is to be well dilated, and the course of the uterine canal determined by the means of the sound; then the uterus is to be washed out with a solution of permanganate

of potass. 1-1,000 or 1-2,000, according to a given case, with the use of as large a catheter as can be passed. The uterus should now be curetted. The next step is to wash out all the debris by the means of the irrigating catheter with a weak solution of boric acid, and as a last step the uterus is packed with dry iodoform gauze.

The packing is done best with Polk's tampon applicator. The end of the gauze is left hanging from the cervix, and the vagina is packed with the gauze also; the dressing should remain in from three to five days. If the uterus is small, there is no renewal of the uterine packing and only the vagina is packed. No applications are made to the endometrium, the vaginal packing being kept up for some time.

In closing I would say that the curette has its indications, and that I advocate the above treatment. There are many other methods of treating gonorrheal metritis by application of carbolic acid, chloride of zinc, either in solution or in the form of paste made up into a crayon to be introduced into the cavity of the uterus. But those methods are as dangerous as they are useless.

LEXINGTON, KY.

THE SCOPE OF COLOSTOMY IN CANCER OF THE RECTUM.*

BY JOHN MASON WILLIAMS, M. D.

Colostomy in the treatment of cancer of the rectum should be considered only as an advanced palliative treatment. Cancer of the rectum if seen by the surgeon in its incipiency, and this should be understood as meaning the first few months of the disease, say not later than the sixth or eighth month, and subjected to removal by excision, or preferably by resection, may be permanently cured in a large proportion of cases.

Unfortunately, however, the surgeon rarely ever sees a case until it is too late for him to advise the operation of removal with any degree of hope for the patient as to the favorable outcome of the operation.

The case in such instances has manifested all the advanced symptoms, such as a growth that is almost large enough to cause obstruction, or the growth has extended well up toward the sigmoid, or involved so much tissue that removal is almost if not quite impossible.

* Read at the June meeting of the Kentucky State Medical Society, 1896.

A majority of the cases will, upon examination, present a general infiltration of the pelvic lymphatics. All in all, the patient is hopelessly infected and the end is not far off, for cancer at this stage is a mortal disease. It is then in such cases as the above that colostomy as a palliative treatment is indicated and should be brought to interfere immediately.

It is not necessary that I should describe the different classes of malignant growths that invade the rectum, and I shall confine myself to the conditions as they may exist that require colostomy.

First of all we consider the cases of obstruction. Upon first examination you will discover a huge mass occupying the whole of the ampulla, or it may extend well up to the sigmoid, involving the entire surface of the rectum. There is complete obstruction of the bowels. It becomes quite evident that to use oils, injections, or other means to give relief will only result in loss of time. The rational treatment of such a condition is an immediate colostomy, while the patient yet has vitality enough to withstand the surgical interference. Procrastination in such cases will result in death; whereas, if colostomy had been done immediately, the patient would have been relieved of much pain and discomfort and life prolonged for months and perhaps for years.

Next we will take up the class of cases that may be benefited very greatly by colostomy. Bleeding is not an infrequent complication, and often begins rather early in the disease, and may be one of the first symptoms observed, though the disease may be far advanced. Usually the hemorrhage occurs from a soft, spongy growth caused by the constant passing of feces over the raw and unprotected surface. The hemorrhage is frequently alarming, and indeed a number of cases are reported where the hemorrhage has proven fatal. The patient is at least considerably weakened after severe hemorrhages as well as experiencing increased pain. By frequent curettage this class of patients may be benefited for a time, but the growth returns very quickly and usually becomes more extensive. A colostomy, however, removes the exciting cause, as by establishing an artificial anus the irritation of the passage of feces over the bleeding surface is stopped, hemorrhage is promptly checked, and the patient is given years of comparative comfort.

Some cases of cancer of the rectum give intense pain, for the feces may pass over an angry, ulcerated surface or into a crater-like mass where small portions may become lodged. When the feces pass over

such a surface it incites a strong desire to constantly go to stool and such incessant straining gives rise to very intense pain, so that here colostomy is indicated to relieve pain.

The indications for this operation having been briefly outlined, we will now take up the operative technique.

The conditions present in each individual case should govern us as to the choice of the divers operations of colostomy. When, however, only the rectum is involved there is left but two operations to be considered, these being the left inguinal and the lumbar methods.

Of these the inguinal is commonly done, and is undoubtedly far preferable except in one condition, and that being where there is a case of obstruction with a duration of a week or ten days, the bowels greatly distended, and an immediate opening of the colon is necessary. It is then under such conditions that the lumbar operation may be the choice. The colon being very much distended is more easily found, and it is possible to incise the colon without entering the peritoneal cavity.

The operation is very objectionable for the reason that a large number of cases have been reported by some of our best surgeons where the small intestine and not the colon had been incised; and other viscera have been injured from time to time. Again, it is necessary to make a long and deep incision, destroying a great deal of tissue. The wound heals very slowly and union by first intention rarely ever obtains.

The inguinal operation has the advantage of being in front, and under the observation of the careful eye, where it is an easy matter to see every step of the operation and to inspect the bowel before incising. It is not necessary to open the bowel at once, as it may be left for twenty-four or forty-eight hours, when there may be expected to be pretty firm union, or at least the peritoneal cavity is well blocked off by the lymph, and thus preventing extravasation of fecal matter into the cavity. Again, the artificial anus is in front where the patient can attend to it with little or no discomfort. A pad or truss can be fitted very easily, and with ordinary cleanliness there will be no offensive odor. The patients get well more quickly and suffer less pain.

The Operation of Inguinal Colostomy. An incision two inches in length is made one inch inward from the anterior superior spine of the ilium and parallel with Poupart's ligament, with one sweep of the scalpel down to the peritoneum; the peritoneum is then caught with two pairs of artery forceps and held well up from the intestines to pre-

vent injury and divided the full length of the skin incision. A large flat sponge is now introduced into the abdominal cavity to protect the intestines and to catch all leakage of blood from the divided muscles; in this way the cavity is not soiled. The parietal peritoneum is next brought up into the incision and sutured with a continuous catgut suture to the skin around the entire margin. This procedure prevents the extravasation of blood from the abdominal walls into the cavity after the operation and causes union to take place with the gut within a very short time. The sponge is next removed by the silk cord you have previously tied to it to prevent its loss. The colon is then searched for. It usually presents into the incision, or can be easily told by its longitudinal bands and by the fact that it is thicker and offers greater resistance to the touch than the small intestines.

The colon found, it is brought into the incision and pulled well out from above until held firmly by its mesenteric attachment. This is done in order that there may be no procidentia, which sometimes occurs if this precaution is not observed. A suture of silk-worm gut is now passed through the abdominal wall three quarters of an inch below the upper angle of the wound, through the mesentery, well up toward the upper portion of the colon that has been drawn up, thence out through the abdominal wall at a point corresponding to the point of introduction; the needle is then passed back three quarters of an inch below the suture already in place, by simply reversing the steps and bringing it out at the same distance from the former suture; the two ends of the suture, which are now on the same side of the incision, are tied firmly together. This leaves about three quarters of an inch below and above for the colon. The colon is now sutured to the peritoneum, which has been previously sutured to the skin. A suture should be placed at the upper and at the lower angles of the wound and on either side of the colon above and below, and still more if there be any gaping or a tendency of the intestines to protrude. Sutures should be passed through the longitudinal bands if practicable, as they will hold much better. The next step is entirely optional, as the bowel may be left for several hours as it is before incising it, or, what is preferable, the Allingham clamp may be used.

This device is of two steel bars four inches long, with spikes all along the clasping sides that interlock with each other when the bars are screwed together by the screws at either end for this purpose. This supports the sutures you have in place, and the bowel may be

amputated at the site of pressure without pain and without hemorrhage after twenty-four or thirty-six hours; while, if the clamp is not used, you find it frequently necessary to administer an anesthetic to incise the bowel, and severe hemorrhage which is difficult to control may ensue.

A moist dressing of bichloride gauze covered with rubber tissue and the usual surgical dressing complete the operation.

LOUISVILLE.

HYSTERO-MYOMECTOMY FOLLOWED BY VOLVULUS.*

BY ARCH DIXON, JR., M. D.

I wish to report the following case on account of a complication which was not only unusual but also fatal, and which occurred on the evening of the fifth day after the operation when the patient seemed well on the road to recovery.

L. W., aged forty-six, mother of one child, menstrual life normal until eighteen months ago, when she began to suffer from metrorrhagia which had continued ever since. Six months ago she noticed a swelling on right side above the symphysis pubes. The growth had rapidly increased in size, and for the past two months patient had been a great sufferer from pains in the back and lower extremities. Saw case first May 7th. Examination revealed enormously enlarged and nodulated uterus, which was pushed to the left by a mass that sprang from the right side of the uterus. Both the uterus and growth could be easily outlined through the abdominal wall.

Operation May 13th (ether). Assisted by my father, Dr. Arch Dixon, the abdomen was opened in the median line, the growth, which proved to be a large fibro-myoma of the uterus, was delivered, the ovarian arteries tied with silk and cut through, a sound was put in bladder, the vesical peritoneum stripped up, *noeud* applied, and the uterus amputated. There was no hemorrhage up to this time, but as I was taking my first suture in the parietal peritoneum after stitching the peritoneum around the stump, a profuse hemorrhage started from the right broad ligament. The vessel was quickly caught and tied, proving to be in the broad ligament below and not included

* Read at the June meeting of the Kentucky State Medical Society, 1896.

in the ligature put on the ovarian artery. I had cut below the tissue included in the ligature, and it did not bleed at first. The pelvic cavity was well sponged out, the parietal peritoneum sutured to the peritoneum of the stump in the lower angle of the wound, and the rest of the wound closed with interrupted silk-worm gut sutures. Iodoform dressings were used on the wound and stump. The operation lasted thirty-five minutes, and the patient was put to bed with a pulse of eighty-four.

Patient's condition was good up to the night of May 17th, when her pulse ran up to 120, and she began vomiting. Up to this time her highest morning temperature was 99.5°, and evening, 100.4°. Her pulse had ranged from 84 to 110, she had not vomited since the operation, and the abdomen had not been the least bit tympanitic. Rochelle salts was given, and bowels had moved slightly on May 16th after enema, and two enemas on the 17th were followed by slight bowel movements and the passage of some gas. No opium had been given, and the patient had complained of very little pain.

May 18th, morning temperature 98.8°; pulse 130; vomited yellowish-green fluid; bowels slightly tympanitic. At four o'clock vomiting became stercoraceous, and a diagnosis of intestinal obstruction was made. The abdomen was at once opened under ether. The stump and wound were dry and clean, the latter firmly healed. A portion of the small intestine (ileum), two inches long, was found adherent to the peritoneal edges of the upper angle of the wound. After gently separating the adhesions a coil of small intestine about two feet long, greatly distended and congested, the apex of which was the portion that had been adherent to the abdominal wall, was found twisted on its axis forming a volvulus. The intestines above and below the twisted loop were perfectly normal, and there was not the slightest sign of peritonitis, except around the two inches of gut that had been adherent to the abdominal wall. The gut was untwisted and showed no inclination to resume its former abnormal position, though the distension was little if any diminished. Abdomen was flushed with hot sterilized water, an iodoform gauze drain inserted, and the abdomen closed with silk-worm gut sutures. Patient became greatly prostrated while on the table, but

fecal odor to the matter vomited. High enemas were given during the day, resulting in the passage of a large amount of gas, with but very little fecal matter. Evening temperature 98.8°; pulse 124. During the night the patient's skin became cold and clammy, her temperature subnormal, and her pulse too rapid to count. She died May 20th at 11 P. M.

Was the volvulus caused by the adhesion of the bowel to the abdominal wound, the peristaltic action of the gut above the fixed portion causing it to twist on its axis? Or was there a paralysis of the gut from the first, and was that the cause of the bowel's not assuming its normal position after the operation?

HENDERSON, KY.

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, May 29, 1896, Dr. W. L. Rodman, President, in the chair.

Exhibition of Pathological Specimens. Dr. W. L. Rodman: This is the upper part of the spinal cord of a case with the following history: A young man, twenty-seven years of age, was working in the mines near Pineville, Ky., and one day, while sitting on top of a car going into the mine, he was caught on the shoulder and pressed downward, sustaining a fracture of the fifth cervical vertebra. He was paralyzed completely in the lower extremities, also in the upper, but not completely. I saw him a few days after the accident, and was able to diagnose the fracture and endeavored to reduce the dislocation. I could by putting my finger against the posterior wall of the pharynx feel the fracture. This was on Thursday. Saturday he felt better. Sunday morning he expressed himself as being very much better than at any time since the accident. A short time after this he was found by his brother dead. At the autopsy the body of the fifth cervical vertebra was found almost disintegrated; a lamina pressing upon the cord had cut about one fourth the way through it. All the symptoms of fracture of the vertebra were present in this case. I congratulate myself that I did not attempt a laminectomy upon this patient. I was satisfied that there had already been such changes that would have put the operation out of the question.

I will also to-night make a continued report of a case I reported at the last meeting. Two days after the meeting I trephined the patient and removed a one and a half inch button. Just under the button I found a cyst in the pia mater which was incised. The arm center was recognized by the battery, and that being the starting point of the paroxysms I concluded to trephine over that point. There was no hemorrhage of special importance. The membranes were closed with a continued stitch. I was compelled to make drainage with iodoform gauze on account of the fact that I cut a large vein in the dura mater. The boy suffered a good deal from shock, but barring that has not had a bad symptom. He has had no paroxysm since the drainage was taken out forty-eight hours after the operation; he appears brighter, and is improved in every way.

Dr. A. M. Cartledge: I would like to bear out Dr. Rodman's conclusions with reference to operative procedure in the first case. Unless such are operated upon within two or three days such degenerative changes occur that the trouble progresses and the patients die in any case. I saw a remarkable case some time ago in a woman who had attempted suicide. I was called to see her on the eighth day; the pulse was 80, temperature 100°. The woman had shot herself in the center of the epigastric region, the ball lodging in the dorsal spine and causing immediate paralysis from the point of lodgment down. Outside of a little circumscribed peritonitis she was doing very well; there were no symptoms referable to the stomach. She is living still, but paralyzed. The woman was pregnant at about the seventh month when this attempt at suicide was made. Miscarriage occurred; she got along without any abnormal feature.

Dr. A. M. Vance: I have seen several fractures of the neck. One case which I treated at the City Hospital lived eleven days without operation. The patient was a tramp who was lying asleep with his head toward the end of a car. The train backed violently into some other cars, and his head was driven against the car, breaking his neck. Another was a fracture of the fourth cervical vertebra with paraplegia from the seat of injury downward from a blow by a fly wheel. The patient would not allow me to do a laminectomy until the eighth day, which I did under cocaine. He lived twenty-one days, death being due to hypostatic pneumonia.

It is curious that many of these cases occur as Dr. Rodman's did. I had another case, a man who was driving a wagon, and, going under a

doorway, he did not stoop low enough and struck his neck. In another case a farmer had a similar accident happen to him in the same way.

Dr. J. B. Marvin: In the first case there is the point that every vertebra you go up the more dangerous these injuries become; fracture of a cervical vertebra is almost certain death. In the case reported by Dr. Rodman the vertebra is not only fractured, but the spinal cord is soft, degeneration going on in both directions. If the patient had survived the fracture he could never have recovered from the injury to the cord. Another case from which I have the specimen the patient was shot about the fourth or fifth cervical vertebra and was totally paralyzed from that point down. We tried to locate the point of injury and remove the ball, but for fear of death on the table the operation was stopped. The man lived four or five days. I have the specimen with the ball lodged against the cord.

In regard to Dr. Rodman's second case, I gave my opinion about it before the patient was operated upon. I seriously question whether it is advisable to operate on these cases unless it is early; and the earlier the operation the more the chance of permanent results. Even in distinctly traumatic cases statistics are very unfavorable. I have a case of this kind in which the patient was relieved for a time; but it must be remembered that almost any thing will do this; a change of doctors and a change in treatment will do it. The cases reported as very brilliant are recent; the operators have not waited long enough. I do not think this operation in epilepsy can be claimed as any triumph in surgery.

Dr. Rodman: As Dr. Vance and others have said, fractures in the cervical portion of the column are very apt to occur as this one did; fractures of the body being nearly always the result of indirect violence; fractures of the lamina being due to direct violence as a rule. I fully agree with Dr. Cartledge in the position he takes. These cases if they are to be operated upon at all must be operated upon at once—I should say in the first forty-eight hours. I was surprised to find in the literature of the subject that these cases are not so hopeless as I was led to believe from my experience. In Ashhurst's monograph on the subject you will find that while they are more serious than fractures lower down, a great many of them recover; and he makes a plea for the treatment of these cases by extension and counter-extension rather than by operation. There is a growing opinion among surgeons that few of these cases do well after laminectomy.

As to the advisability of operating in these cases of focal epilepsy, while it is true that many of them are not cured or benefited in any way permanently, yet if any of them are cured the operation is advisable. There are sufficient cases on record that establish undoubtedly the advisability of the operation. Yet the operator should be very guarded in making promises to these patients. When a case is brought to you, if after an explanation the patient himself and those capable of speaking for him demand the operation, I think it is not only justifiable but it is our duty to operate.

Presentation of Clinical Cases. Dr. Thomas Hunt Stucky: Here is a little boy, nine years of age. Last Sunday a week ago he was eating peanuts. Another boy suddenly pushing him from behind, he let go the peanut and I suppose it went into the trachea. He at once became cyanotic, almost pulseless, extremities blue and eyes suffused. They sent for a doctor in the neighborhood, who did not know what to make of the case. I saw him the next morning; respiration was then 40 and he was exceedingly nervous. Since then asthmatic breathing has developed, as if there was some obstruction, which appears to me to be in the right bronchus. He is spitting some blood. If he takes the recumbent position he is compelled to have the window open to get air. The question is whether there is any thing in the bronchus or whether the attack was coincident merely.

Dr. Cartledge: I find the little fellow has a very distinctly marked obstruction about an inch to the right of the sternum on a level with the second costal cartilage. The treatment should be on a well-recognized plan in this case. The danger is that the child will cough up this foreign body, and that it will become impacted against the under surface of the vocal cords with immediate spasm and death. He is fairly safe as long as the foreign body is in the bronchus. I believe the treatment should be tracheotomy and keeping the wound open two weeks at least, and if at the end of that time the foreign body has not been coughed up allow the wound to close. I had a case parallel to this; a young man was walking along whittling a piece of corn-stalk, and accidentally swallowed some of the pith and a small piece of the rind. He had the usual history of a foreign body in the trachea, the symptoms subsiding after three or four days, leaving him with a little bronchial irritation located just where this is. I did tracheotomy, keeping the wound open eleven days, in the hope that the foreign body would be expelled. Finally the boy tired of the confinement and of the

traction upon the edges of the tracheal opening, and I allowed it to close up. Four months later, in a violent fit of coughing, he brought up a piece of corn-stalk, somewhat macerated but as large as the end of my finger. But the fortunate termination of that case should not be a guide to non-interference, for the rule is that impaction occurs on the under surface of the larynx, and death results.

I should like also to call attention to the few symptoms presented by a foreign body lodged below the larynx as in this boy. Yet this boy may be dead to-morrow morning.

Dr. F. C. Wilson: After listening to the chest carefully on the right side, about in the location of the bronchial tube leading to the upper lobe, I find very coarse sonorous râles and some finer sounds above this. I hear these anteriorly and posteriorly in the same location, and it seems to me, in view of the history, they could only be caused by a foreign body producing obstruction not complete. There seems to me no doubt about there being a partial obstruction at that point. I recollect some years ago examining a woman who had swallowed a dime, the coin passing into the right lung as any foreign body would do. We could locate the foreign body very clearly, and I suggested that we get her husband, a powerful man, to turn her upside down and it might be dislodged. Fastening her dress around the ankles he did so, and out the coin flew. We were prepared to do tracheotomy had the dime lodged against the under surface of the vocal cords.

Dr. J. E. Hays: I find there is a difficulty on the right side near the root of the right lung but more toward the front and behind. I am unable to name just the point where the trouble exists and the nature of it.

Dr. C. Skinner: There is unmistakably an obstruction cutting off the air from the apex of the right lung not complete, and the sounds are heard, as Dr. Hays says, more distinctly in front than behind. I believe he should be treated expectantly, and that the foreign body will finally be coughed up.

Dr. Wm. Bailey: In regard to the diagnosis it would be easier at the time when the defect in breathing was most marked. The obstruction certainly does not completely fill the tube, for now there is no difficulty in breathing. With tracheotomy he would not have the same power to remove a foreign body that he has now. It is accomplished by getting air below the foreign body, and then by controlling the glottis proper pressure is made, the glottis is opened and the pressure of the

air behind carries the foreign body along with it. The chances for expelling a foreign body would be greater without operation, but the chances for the patient would be better if the operation were done. It is my judgment that the operation ought now to be performed; and, if after keeping the trachea open the foreign body is not coughed up, the wound should be allowed to close and nature to take its course.

Dr. J. A. Larrabee: I would simply say that I have seen a number of tracheotomies for foreign bodies and have never seen one which failed to relieve. I have had two fatal cases in my practice in which operation was refused; but in one of these, in which a rivet had gotten into the air-passages, I do not believe the operation would have done any good. We all seem to be on one side as to what should be done in this case, and that it ought to be done at once.

Dr. L. S. McMurtry: The case presents for consideration a very delicate point, which it seems to me ought to be considered in this manner. The history of these cases is that the foreign body is usually coughed up about this time—a little earlier or a little later. The question to consider is, how much danger is there in tracheotomy as a complication of the present condition, and is the danger greater if the patient is left alone? The greatest danger is that in coughing it up the foreign body will become impacted within the larynx. There is certainly less danger in tracheotomy; and the probability is that with the cough excited by the admission of air through the tracheal wound the foreign body will be coughed up. I think the safe side is in doing tracheotomy, and immediately.

Dr. Thos. S. Bullock: I do not believe there is any doubt of there being a foreign substance in the bronchus, and I do not think there is any doubt as to the propriety of doing tracheotomy.

Dr. J. G. Cecil: I agree with the gentlemen who have preceded me that there is a foreign body lodged in the region indicated. However, I would not agree to the treatment outlined by Dr. Cartledge. The foreign body must be small, and I do not think the amount of secretion around it or the swelling of the body is sufficient to prevent its safe return by the natural passages.

Dr. F. C. Simpson: Last September I saw a boy that had gotten a watermelon seed in his lung. In January the boy had a hard attack of coughing and brought up the seed.

Dr. W. O. Roberts: Admitting that the cause of the disturbance of breathing is a foreign body, it is giving rise to very little trouble now,

and therefore I think the best plan would be to defer operative interference for a while with a hope that the patient will cough it up.

The case mentioned by Dr. Simpson I saw. The seed was giving the child very little trouble. I advised the family to wait, and if it gave trouble, I would operate. I heard afterward that the child was taken, by the advice of a physician to some neighboring place, where whooping cough was prevailing, with the hope that he would catch the disease, and in a paroxysm of coughing the foreign body would be expelled.

In tracheotomy for foreign bodies it is very important that a free incision in the trachea be made and that the lips of the wound be held wide apart so as to offer an easy exit. I think this can best be accomplished by passing sutures through the lips of the wound in the trachea and tying them around the neck. Mechanical appliances, such as hooks, etc., are apt to become displaced. Some years ago I had charge of a case that was operated upon by Professors Yandell and Cowling at the University Clinic, in which a cockle-burr had lodged in the right bronchus. Two hooks were used to keep the trachea wound open, a student, who was nursing the case, went out of the room for some purpose, and in his absence the child had a violent paroxysm of coughing and getting hold of the hooks, pulled them out. He died in a few moments of suffocation. I made a *post-mortem* examination and found the burr blocking completely the larynx. Had the opening in the trachea been larger and its lips held wide apart, the cockle-burr would have been expelled; as it was it passed the opening and went up into the larynx, and not sufficient air got into the tracheal wound to prevent suffocation.

Hard smooth-surfaced foreign bodies, which move up and down in the trachea during paroxysms of coughing, will be expelled immediately after the opening is made, but in the rough-surface foreign bodies it may be two weeks or more after the operation before they come out, and it is important of course to keep the trachea well open until the foreign body comes away.

From the time of the operation it would be well to watch all evacuations from the bowels. Some time ago I operated for a shoe-button in a young boy; while going under the chloroform, he had a most violent paroxysm of coughing. Three days after the operation his mother fortunately examined the actions from the bowels and found the button. This, of course, was coughed up and swallowed during the

administration of the chloroform. So far as my individual experience goes the mortality following tracheotomy for foreign body is very small. I have operated a great many times myself, and have looked after the after-treatment in many cases operated upon by Dr. Yandell, and the case reported above is the only death I have had.

Dr. Rodman: I am clearly of opinion with Dr. Cartledge and the others who have spoken. The operation of tracheotomy is not *per se* a dangerous one, while the presence of the foreign body is a constant menace to the life of the child. My own experience has led me to believe that early tracheotomy is the only procedure. The proper procedure would be to do tracheotomy and then allow the patient to come partially from the anesthetic, and lifting the little fellow up by the heels slap him vigorously on the back a few times when very likely the foreign body would come out. I have seen the worst results from the opposite course. I remember one case brought to Dr. Yandell from Indiana; the child was having violent paroxysms of cough, and the operation was set for the next morning. During the night one of the attacks of coughing occurred, the foreign body was carried against the larynx, and the child died.

Dr. Stucky: I advised tracheotomy the morning after the accident. I persuaded the mother to allow me to bring him here to-night in order to get the benefit of the opinion of the Society.

JOHN L. HOWARD, M. D., *Secretary.*

SECTION OF THE CERVICAL SYMPATHETIC IN EXOPHTHALMOS.—Jaboulay (*Lyon Médical*, March 22, May 31, 1896,) in the first of two papers, describes the results of cutting the cervical sympathetic between the middle and superior ganglia in cases of exophthalmic goitre. As an immediate result of this procedure, all the symptoms were ameliorated; but with the exception of the exophthalmos, which disappeared permanently, they returned after three or four weeks. In the second paper the author records another case of exophthalmic goitre in a woman aged fifty-one, of two years' duration. After section of the sympathetic on both sides, the exophthalmos passed away, and the other symptoms improved. The change in the position of the two eyes was not symmetrical; this the author thinks is due to a difference on the section of the sympathetic on the two sides. A young man in whom the sympathetic was divided on one side presented sinking back of the eye into the orbit, while the pupil was smaller than that on the other side.—*British Medical Journal.*

Abstracts and Selections.

NEW THERAPY IN EPILEPSY.—Any remedy that offers any sort of success, even in a limited number of cases of epilepsy, is more than welcome. This is one of the most common of nervous disorders, two in a thousand population being affected, and it is also one of the maladies with which the profession has been well acquainted clinically for two or three thousand years. It might almost be called the *opprobrium neurologicum*, from the fact that so little has been accomplished during this long period, either in regard to its pathology or its cure. We may say, however, that we have recently become more than ever convinced of its manifold pathology. We have come to look upon it more than ever as a symptom of a great variety of pathological conditions. More and more every year do we restrict the number of cases that may be called truly idiopathic epilepsy. We need to examine our cases with the greatest possible care, in order to exclude conditions which may require some particular treatment, such as trauma, tumor, old meningeal hemorrhage, reflex convulsions from genital, nasal, dental, ocular, or gastro-intestinal irritation, or from old cicatrices; epilepsy due to auto-toxemia, and other toxic blood states. But, as in most cases we will find after the most searching investigation no cause whatever for the attack, we are constrained to treat such empirically, and it is to several new empirical methods of treatment that I wish to direct your attention. We will suppose that the bromides and borax and belladonna, and the whole category of old remedies have been tried in vain. I will say that solanum carolinense, or horse-nettle, recently introduced, has had no effect whatever in my cases. On behalf of the tincture of simulo, a South American plant of the hyssop family, I can say, from an experience of several years, that it is perfectly harmless, and that in several instances it has had remarkably good effect where other remedies have failed. The so-called opium-bromide treatment of Flechsig is of great use for many patients, particularly in old and obstinate cases, where all other agents had been inefficacious. This treatment consists of the administration of opium for some six weeks beginning with one half to one grain, three times daily, and gradually increasing until ten to fifteen grains per day are taken. Then the opium is suddenly stopped, and bromides in large (thirty grains four times daily) and gradually reduced doses are given.

Another new combination with the bromides has been suggested by Bechterew, viz., that of adonis vernalis. As you know, adonis vernalis has been in common with digitalis, which has been used in past years in epilepsy, but the employment of the former in epilepsy and conjointly with the bromides is new, and in several of my cases the result has been more than usually gratifying.

I can not forbear referring here for a moment, in closing, to the moral treatment of epilepsy, which is certainly new, and which has not received until lately any of the consideration which it merited. It is only too well known to all of us how epileptics have been dismissed with a prescription, and possibly some advice as to regulating the diet, rest, and exercise. But the special needs of this peculiarly unfortunate class of dependents had never been brought fully before the profession. No hospital receives them. The schools can not take them. No one wishes to employ them. They are ostracized from society, forbidden to take part in the recreations of their fellows, and shunned, more or less, by everybody. Untaught, idle, sick, neglected, they drift finally into the only shelter offered them—almshouses and insane asylums. But a large majority of them, were it not for their attacks, could be educated in schools, could acquire trades, could enjoy recreations, and take part in the affairs of mankind. Thus it is that a scheme of colonizing them has been undertaken in several of the United States, following the example of Germany and France. I will only allude briefly to the plans already in operation in the State of New York, at Craig Colony. The State has here a tract of nearly one thousand nine hundred acres of the very best kind of agricultural land with already some thirty or forty buildings upon it. Here the epileptics of the State already upon public charge are being congregated (there are over one thousand to be cared for in this manner), and are to be given education in the usual branches of learning, taught every kind of industrial occupation, to be treated for their malady, and be afforded a home in a sort of a village life, where they will no longer feel their social isolation nor be barred from the innumerable privileges enjoyed by the rest of humanity. This moral treatment of epilepsy is by far the greatest stride in advance taken for centuries in the therapeutics of one of the most distressing of nervous diseases.—*Dr. Frederick Pearson in American Medico-Surgical Bulletin.*

PETROLEUM POISONING.—Johanessen (*Berl. klin. Woch.*, April 20-27, 1896,) relates a case in a girl, aged two years, rapidly fatal. The child had drunk American petroleum out of a beer bottle. A distinction must be made according as to whether the petroleum vapor is inhaled, or the oil has been rubbed into the skin, or has been taken internally. It would appear according to Lewin's researches that among workers in petroleum springs no ill effect is produced, that is as long as the vapor is inhaled in the open air, but in factories similar symptoms are produced as by ordinary gas. A feeling of exhilaration is first induced, then heaviness in the head, vertigo, loss of consciousness, or anesthetic sleep. Cyanosis, contracted pupils, and vomiting may occur. Once a fatal result was seen. Chronic bronchitis with anemia may appear after long exposure to the vapor. Results similar to

serious symptoms. A diseased inflammation of the cutis may occur in several cases. Petroleum has been taken internally with suicidal intention or by misadventure. The symptoms have not always been in proportion to the amount taken. There are two sets of symptoms: (1) Gastro-intestinal, the kidneys being also involved; and (2) nervous. In the former case there is vomiting as well as the local irritation in the mouth and gullet. Diarrhea with colic, may supervene. In the cerebral form there is headache, anxiety, vertigo, and the pulse is small and infrequent; collapse may occur. It resembles a medium degree of alcoholic poisoning. Tetanic convulsions have been seen. A marked petroleum smell has been noted in the sweat and also in the urine, which may sometimes smell of violets. The urine may also contain albumin and formed elements. In no previous case has an immediate fatal result been reported. The author refers to two recorded cases in children, both of which recovered. The author's case occurred in a rachitic child who had suffered from diarrhea. The amount taken was unknown. Vomiting ensued, and the stomach was washed out and clysters used. Two hours afterward the child was unconscious, and three hours after admission into hospital it died in coma. No pathological changes sufficient to account for death were found. The case appeared to be one of cerebro-spinal intoxication. Frequent pulse, difficult breathing, and comparatively low temperature were observed.—*British Medical Journal*.

STATISTICS ON WEIGHT OF INFANTS, SEX, AND FETAL HEART-RATE.—

Statistics of large numbers of cases are often useful to correct erroneous impressions on statistics from small numbers. A paper read before the Obstetrical Society of Boston, on February 18th of this year is interesting and valuable from this point of view as showing the results obtained from observations in a large number of infants as regards weight, sex, and fetal heart-rate. Thus the assertion is often found in text-books that the fetal heart-rate of girls is more rapid than that of boys. It appears to depend on the statement made in 1859 by Frankenhauser that the average fetal rate in boys was 124, in girls 144, and this he obtained as a result of fifty observations. It is no wonder that predictions of sex based on such a small foundation should be disappointing. Taking a thousand cases at full term at the Boston Lying-in Hospital, the average rate of the fetal heart was as follows: 500 males, 140.26 per minute; 500 females, 141.83. The difference of one and a half beats is, of course, valueless for prophetic purposes. Let us hope that Frankenhauser's statement will no longer be copied into the text-books. The average weight of these 1,000 full-term infants was as follows: 500 male infants, 7 lb. 8.9 oz.; 500 female infants, 7 lb. 5.1 oz. It might be said that the slightly slower heart-rate in the boys depended on the slightly heavier weight of the male sex. It is interesting to note, however, that some of the very heavy babies had rapid hearts, and *vice versa*; so that no individual prediction of the weight of the child could be made by the heart

beat. The variation in the rate of the heart-beat at different periods in the labor is also a commonly observed fact. Of 7,515 deliveries at the Boston Lying-in Hospital, the heaviest child was a female weighing 12 lb. The infants were all carefully weighed, and the actual weight without clothing was obtained. The following table shows the number of heavy children over ten pounds in weight born at the hospital:

	Male.	Female.
10 to 11 lb.,	46	25
11 to 12 lb.,	10	5
12 lb.,	1
Total, 87.	56	31

The records of the out-patient department were not considered sufficiently reliable to examine for this purpose. The largest infant, however, in which the record could be trusted weighed nearly 13 lb. This child was carefully weighed in scales that had been tested.—*Lancet*.

TREATMENT OF ANKYLOSIS OF THE HIP.—Lorenz (*Berliner Klinik*, June, 1896,) is opposed to the practice of subtrochanteric osteotomy in cases of osseous ankylosis of the hip-joint. He asserts that by division of the femur below the trochanters, the malposition of the lower limb can not be overcome without further shortening due to the angular bend of the shaft of the femur at the seat of section. A much better treatment, it is argued, is subcutaneous division by chisel and mallet of the osseous bond between the head of the femur or the remaining portion of the neck of the bone on the one hand, and the external surface of the ilium on the other. The operation as applied to the most frequent conditions of ankylosis of the hip, in which the head of the femur has been absorbed, is called pelvi-trochanteric osteotomy. Several advantages are claimed for this method. The osteotomy being what is termed a linear one the external wound is very small, and the operation may be easily performed, and produces very little disturbance of the soft spots. As the correction of the deformity is affected by an immediate attack on the angle causing the malposition of the limb, there is no interference with the shaft of the femur, the length and normal direction of which are still maintained. It is stated that no difficulty will be experienced in restoring the normal position of the limb if, at the same time, the adductors and the muscular and fibrous structures in front of the joint be divided subcutaneously. The relations of the surfaces of the divided bones to one another are very favorable to a restoration of the proper direction of the limb, whether this be fixed in a position of flexion, abduction, or adduction. The after-treatment in cases in which pelvi-trochanteric osteotomy has been performed is extremely simple, as there is no necessity for long confinement of the patient, who by the application of a plaster apparatus to the affected limb, and by elevation of the opposite foot on a patten, may be enabled to leave his bed on the fifth or sixth day. This operation, it is held, besides effectually removing the fixed osseous deformity, will, provided

the after-treatment be carefully attended to, in all probability result in the formation of a movable joint, and in the restoration of the seriously impaired muscular action of the limb. These conclusions are based on the results of six cases in which pelvi-trochanteric osteotomy has been performed by the author, full reports of which are given in this lecture.—*British Medical Journal*.

SPITTING AND DISEASE.—The *Revue de Hygiene* says: "At Paris, following the resolution of the Council of Hygiene, passed two years ago, the prefect of police has caused omnibuses, railroad cars, steamers, etc., to be placarded with notices, asking passengers not to spit on the floor. We know how little this order has been respected. The most daring of the protesters against this order smile at it maliciously, then spit on the floor and smile."

The writer then goes into all the horrible details of the germ coward who sees danger lurking in every breath of air and every drop of water. He is certainly one of the variety of pseudo-scientists who worry the life out of themselves and every one else by their constant state of alarm, let the good God call them away with some so-called germ in a cloud of dust or a drink of spring water. In some of the European sanitariums frequented by tuberculous cases, such as Davos, Saint Moritz, Gœrbersdorf, Falkenstein, Leysin, etc., all patients arriving are obliged to provide themselves with small, portable spittoons, of which several varieties exist. The patient who spits on the floor the first time is reprimanded; the second offense followed by dismissal from the establishment.

Very few of these portable spittoons are used in Paris, and few pharmacies keep them, which goes to prove that most physicians are unmoved by the alarm exhibited by germ fanatics, who seek to terrify the community by the interest of serum remedies and the manufacture of so-called germicides whose principal charm consists in their bad smell. There are hundreds of doctors in France, who have practiced for many years among families, and have never yet been able to persuade themselves that any element of contagion exists in phthisis, the germ to the contrary notwithstanding. It is the college professors and bacteriological sharks in laboratories who, for the most part, insist on the devastation wrought by the tubercular germs said to be found in sputa. Humanity in mankind will sink to a very low ebb when those nearest and dearest are proscribed as public lepers because they have phthisis, and are forced to wear the portable spittoons as a badge of ignominy. There is a species of so-called sanitation that will meet with strong opposition from all brave men, that is, the attempt to drive consumptives outside the pale of society, on the score that they are laboring under a highly contagious malady. Few men who have ever practiced among the masses of the people will ever admit that there is even the slightest element of contagion.

Spitting on pavements and in public is, undoubtedly, a filthy, vulgar habit, whether the party so addicted be in health or disease; but to make

every man carry such a ridiculous utensil as the portable cuspidor of the DeHerciler pattern, that is now the most fashionable model in use, is preposterous. Many refined people will continue to spit in their handkerchiefs should the occasion arise, without regard to the feelings of their washerwomen or laundry-maids. Many persons will follow the dangerous custom of swallowing their nasal and lung discharges, thereby favoring indigestion and dyspeptic troubles. France turns to the United States and Great Britain and wonders how the hosts of tobacco chewers will manage to stagger about under the load of the gigantic cuspidors they will need when laws against spitting are enforced. If American and English laws could only be enforced among tobacco chewers it would be high time for the millennium. We wonder what new ideas the so-called sanitarians of the world will spring on us next. Yet these hygienic writers will continue to stir up public alarm on the given line. As the immortal Bard of Avon remarks in "As You Like It," such gentlemen are

"Very good orators, when they are out, they will spit."

Let us trust, for the sake of the audiences they attract, they will not use the new fad, the portable button-hole spittoon. Will our English and American cousins cease chewing plug tobacco, or will they keep on chewing and swallow the juice? In the latter case emetic effects may be noted in many instances, and some new found and deadly stomach germ will be turned up to frighten the ever timid and daphnool general public into sanitary fits. *The Cincinnati Lancet-Clinic.*

THE BACTERIOLOGICAL DIAGNOSIS OF MALARIA.—In the May number of *Archives de Médecine Navale et Coloniale* Dr. du Bois Saint-Sevrin has a short paper on the best way to identify the presence in human blood of the parasite which M. Laveran regards as the exciting cause of malarial fever. Dr. Saint-Sevrin, who is Professor of Bacteriology at the Naval School at Toulon, believes firmly in the specific character of the alleged hematozoa and, manifestly ignoring some recent developments, even goes so far as to assert that for some years the fact has not been seriously contested. He thinks that the reason why so many conscientious observers fail to find the parasite is because they follow defective methods of research, being misled by their habitual guides. The writers of treatises on microscopical procedure, while correct for the most part, nevertheless copy each other in perpetuating certain erroneous indications which tend to lead neophytes away from the proper path. For example, they all maintain that the patient whose blood is to be examined must not have taken any quinine for a considerable period, but in upward of one hundred cases, not taking the alkaloid, Dr. Saint-Sevrin never once failed in demonstrating the specific agent. It is essential, however, that the blood for examination should be drawn at the commencement of a malarial paroxysm. Another erroneous indication consists in recommending the employment of fresh blood without the use of staining reagents. It is true that by this method

alone can the flagellated bodies be demonstrated; but these, though academically interesting, are not essential from a diagnostic point of view. The small, recently developed bodies almost entirely free from pigmentation are what we have chiefly to depend upon for purposes of identification, and even with experienced observers there is often great difficulty in detecting them when staining material is not employed. During the period of apyrexia a patient who is taking quinine regularly the hematozoa as a rule can not be demonstrated in peripheral blood; they only make their appearance on the advent of a febrile paroxysm. The writer endeavors to account for this by the hypothesis that the parasites are momentarily lodged in the spleen, but the explanation is scarcely all-sufficing. Dr. Saint-Sevrin's paper, which is illustrated by an admirable colored plate drawn by M. Boyer, terminates with the following conclusions: (1) Double staining with eosine and methylene blue constitutes the most favorable procedure for a rapid examination of paludal blood. (2) Canada balsam forms the best mounting for preserving the preparations. (3) Bacteriological examination should invariably be undertaken in all doubtful febrile cases. (4) In many cases prognosis and treatment can not otherwise be established.—*Lancet*.

PANCREATIC CALCULUS (*Il Policlinico*).—Giudiceandra, continuing his study of this question, believes that the efficient cause of pancreatic calculus is chemical alteration of pancreatic secretion, due, in most cases, to the action of microbes. Mere retention of secretion, although a predisposing condition, is not an efficient cause, for CaCo_3 predominates in pancreatic calculi, whereas it is not present in the normal secretion. As to frequency, pancreatic calculus appears not uncommonly in connection with diabetes (twenty-two times in two hundred and twenty-five cases). It is more common in men than women (nineteen men, seven women), and chiefly attacks people of the late middle life. Among the subjective symptoms occur pain, chiefly in the left hypochondrium, sense of weight in the abdomen, nausea, etc. Objectively, there are glycosuria, fatty feces, fatty diarrhea (steatorrhea), jaundice, pyrexia, wasting, and salivation (probably due to reflex irritation of the salivary glands). The diagnosis is seldom certain, but if with the above symptoms one meets with calculi in the feces, which can be recognized as pancreatic in origin (and the author points out the special points of differentiation) then one may with comparative certainty affirm the existence of stones in the pancreas.—*British Medical Journal*.

REFORMING THE RACE.—Connecticut passed a law last year that makes it a felony for a man or woman who is an epileptic imbecile, or feeble-minded, to marry or live together as man and wife when the woman is under forty-five. The penalty is imprisonment for not less than three years, and any person who shall aid or assist, or in any manner countenance such a thing, shall be fined not less than one thousand dollars, or be imprisoned for not less than one year, or both. The same punishment follows if carnal intercourse takes place out of wedlock.—*American Medico-Surgical Bulletin*.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ."

Vol. 22.

SATURDAY, JULY 28, 1896.

No. 2.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

Subscriptions and advertisements received, specimen copies and bound volumes for sale by the undersigned, to whom remittances may be sent by postal money order, bank check, or registered letter. Address

JOHN P. MORTON & COMPANY, Louisville, Ky.

THE SIN OF SUBSTITUTION.

The Pharmaceutical Era of the 2d instant devotes considerable space to substitution as practiced by certain unscrupulous pharmacists who have been called upon to dispense the preparations of the old, trustworthy, and justly celebrated house of Fairchild Brothers & Foster.

Whatever may be thought of the wisdom of prescribing any one of the ten thousand compounds which, under patented fancy names, are offered to the profession as cures for all ills to which flesh is heir, it can not be questioned that the physician has a right to name on his prescription the manufacturer of any particular drug or chemical he may order dispensed, nor will it be denied that the substitution by the pharmacist of any other is bad faith (no matter what the relative merits of preparations by different manufacturers may be), while the putting out of a cheaper preparation at the price of a costlier one is simply unqualified rascality.

While dishonesty is common enough in all callings, we can not believe that the great and responsible profession of pharmacy is represented by any large percentage of such miscreants. But the complaints of Messrs. Fairchild Brothers & Foster, with those which we have heard from time to time from other manufacturers, make us fear that the practice is far more common than physicians have heretofore supposed.

The following letter shows how "the thing is done":

DEAR SIR—We beg to call your attention to the following statement of facts, which we believe will be of great interest to you as a practicing physician, relying upon the pharmacist for dispensing the medicines which you prescribe:

On a recent date, a prescription of a . . . physician, ordering "Essence of Pepsine, Fairchild's," was sent to . . . drug store. The bottle dispensed upon this prescription was immediately sealed in the presence of a witness and expressed to us. A copy of the prescription was asked for and obtained, which proved to be an accurate transcript of the prescription, bearing date and number corresponding to those upon the label of the bottle dispensed. Upon examination, the content of said bottle was found to be a fluid differing materially from Fairchild's Essence of Pepsine, so as to be obviously recognizable as a plain violation of the physician's prescription.

Another written order for Fairchild's Essence of Pepsine was sent to Druggist . . . Upon examination this proved likewise to have been filled with a different and inferior fluid.

Subsequently, the same day, a messenger was sent to . . . and asked verbally for four ounces of Fairchild's Essence of Pepsine. He received a wrapped vial, for which he paid fifty cents. This bottle was found without label, and the messenger returned and asked to have the bottle labeled. The druggist then simply labeled it "Essence of Pepsine." Thereupon the messenger requested the druggist to put "all the name on the bottle." The druggist told the messenger that he "would not dare to put Fairchild's name on the label, although it was all the same." The druggist finally admitted to the messenger that he was "out of Fairchild's Essence," and then returned the fifty cents.

There is one significant fact that should also be mentioned; the price charged in these cases (as in every instance coming to our knowledge) is the same as the patient would be charged by pharmacists who dispense the genuine medicine ordered. Comment is unnecessary.

In defense of our own rights, and in order that you may take such means as you deem best to protect yourself and your patients, we advise you of these facts. We further respectfully request that in prescribing Fairchild's Essence of Pepsine, you will kindly send the prescription to the pharmacists, of whom there are many, who will faithfully respect their legal and professional obligations to physicians and to the public.

These prescriptions, sealed and certified, are in our possession, and we stand ready to still further substantiate these statements.

Very respectfully yours,

[Signed]

FAIRCHILD BROS. & FOSTER.

In comment the editor of the *Era* says most pertinently:

Every honest druggist owes it to himself and his profession to speak plainly on this subject. He should adopt the most strict rules for his own es-

establishment; improve every opportunity to condemn the practice of substituting, and see that resolutions to this effect are passed by his local, State, and National associations. Each druggist should make it a point to give his physicians and his customers to understand that when a prescription comes into his establishment it is filled with exactly what it calls for. There can be no middle ground, no compromise, no question on this point. Physicians who prescribe them and the manufacturers who make the goods must have no good cause for such complaints. The honor of the drug trade demands that this stigma be removed. It is not a question of dollars and cents alone, but professional honor is at stake, and we know that every honest pharmacist will join with us in the statement that the druggist who substitutes in his prescriptions is a disgrace to his profession.

It would seem that the American Pharmaceutical Association might take such action upon this evil as would lead to its elimination from the list of inverted blessings which torment the doctor's life.

The manufacturing chemists are rapidly locating the guilty druggists, and if the A. P. A. would expel them from or deny them admittance to fellowship with that distinguished body, the action would place a stigma upon them which would enable the physician to avoid them and thus protect himself and his patients from the evil consequences of substitution.

Notes and Queries.

THE MOSCOW DISASTER.—Never perhaps before in the course of history has a more pathetic and awful example of the aphorism *memento homo quia pulvis es* been recorded than in the news received recently from Russia. Amid all the pomp and majesty by which the blend of Orientalism in the Russian character is so marked the young Emperor had been inducted into the full possession of his sovereignty. The Church had declared the Divine blessing upon his head, and from all parts of his vast Empire had come elders, heads of tribes, and deputies of all kinds to testify by one act their rejoicing and their willingness to be his men. Everywhere was pleasure, gratitude, and joy. Two days after "all was in the dust," and in place of rejoicing there was mourning.

That even the humblest classes might say that they had a share in the general distribution of presents and gifts a dole had been arranged for, consisting of sausage, cake, sweets, etc., and these were to be distributed on the Khodinsky plain. A row of wooden booths with barriers had been erected, and from this center the distribution was to be made. The crowd began to assemble upon Friday night, and upon Saturday morning one of those

uncontrolled and blind impulses by which crowds are sometimes affected left to themselves came upon the mass of people. They pushed irresistibly forward, and when the foremost ranks were checked by the barriers the hindmost continued their advance, with the result that some two thousand persons were crushed to death. There is no need here to go into the horror of the scene or the heart-rending incidents which have already been fully reported in the daily press. Suffice it to say that the gloom which the disaster has cast over the land is unparalleled, for such a catastrophe, lamentable at any time, becomes doubly so when we contrast it with the circumstances which in a way led up to it. With whom the responsibility rests is not very clear, and probably will never rightly be known. It is always easy to blame, especially after the event, and presumably the authorities were not so much willfully careless as worn out. A crowd as large as this was for though the numbers vary in different accounts it obviously was enormous—is almost impossible to control after it has collected. It must be broken up during the process of aggregation and kept moving. Stagnation means pressure and pressure means death. If twenty or thirty different distribution centers had been arranged, and if the crowd had been broken up as it was collecting all would probably have been well.

That a crowd should assemble in such numbers and should become so out of hand for so small a dole as a sausage, a cake, and a tin mug, may seem extraordinary, but to any one who knows the Russian character the course of events will appear plain. The gifts were the gifts of the Czar; the tin mug has his portrait upon it, and the absolute devotion of the Russian peasant to the "Little Father" is a thing that no one who has not seen it could believe. To the peasant the Czar is every thing. He is the head of the Empire, the head of the Church, the father, friend, and protector of his people. In every cottage his portrait hangs and is looked upon with almost reverence as the sacred "Eikon," and it was this feeling that urged the vast mass to what proved to be the death of many. For the relatives of the dead we grieve; with the officials whose duty it was to control the crowd we deeply commiserate; but especially for the young ruler whose position responsible and burdensome at all times, has had added to it an additional sorrow by the death struggle on the Khodinsky plain, our sympathies are the deepest.—*Lancet*.

PERFORATION OF THE AFTER-COMING HEAD.—Hergenhahn (*Archiv. Gyn.*, LI, iii, 2), after reviewing the recent controversy between Strassman, Theilhaber, and others on this operation, brings forward forty-six cases from the Dresden Clinic. Nine of these have been published by Leopold (*Deutsche Kaiserschnitt*), and eighteen by Zeitlemann; the remainder occurred in the years 1891-'94. The operation was performed in 0.24 per cent of all labors, the pelves being contracted in forty and of normal measurement in six cases. In every case save one the child was dead before the head was perforated, and in all the condition of the mother was such as to require

immediate termination of the labor. The scissors perforator was used (once a probe-pointed bistoury); the head, well fixed by external pressure and traction on the trunk, was generally approached by the instrument, protected by two fingers of one hand, under the pubes; but four times, on account of the unfavorable position of the head, the sacral way was chosen. No accident to the mother occurred during the operation from the instrument slipping or otherwise, though the perforation was undertaken by many different and sometimes not very experienced assistants. The instrument was introduced forty-four times into the nearest bone of the skullcap or into the parts about the foramen magnum, only twice through the hard palate or pharynx into the basis cranii, and in one of the latter cases a second perforation had to be made; a second perforation of a decapitated head was also necessary. In twenty-nine cases, traction on the trunk, with or without external pressure, sufficed to deliver; the sharp hook was, generally for demonstration, used nine times, the cephalotribe in three early cases, and uselessly in the tenth; not since. Only eleven mothers were without some laceration, in most cases to be attributed to operations antecedent to the perforation, but forty-one were discharged well, and twenty-nine of these on or before the fourteenth day, and twenty-two had no rise in temperature at all. Of the five deaths (eclampsia, hemorrhage two, rupture of the uterus, and gangrene), none can be attributed to the perforation. The author concludes that when other means have failed, perforation of the after-coming head enables us to deliver a woman without delay and with no excessive danger. When a sufficient opening has been made in the skull, the Viet-Smellie grip and downward external pressure on the head, while the woman is in Walcher's position with her legs dependent, enable us to extract the head without instruments even from an extremely contracted pelvis. He also agrees with Von Herff and others in preferring to operate under the symphysis, which is the shortest way and the best, and allows the protection of the mother's soft parts from the instruments; he deprecates any change in the method of operation or undue delay in performing it.—*British Medical Journal*.

HORSEFLESH AS FOOD.—Private opinion may be allowed to decide what is agreeable to the palate, but wholesomeness in diet can not be regulated by the same flexible standard. Certain statistics recently published in connection with the Belgian trade in horseflesh are interesting as bearing on this subject. From these it appears that about six thousand horses were exported last year from this country as part of the food-supply of the poorer classes in Belgium. Most of these were old and wretched animals, and, what is of much greater consequence, a certain proportion were affected with glanders. Such evidence of mismanagement as these facts afford has naturally attracted the attention of the Belgian Government, who have accordingly taken steps for the better supervision of the horse traffic, and specially for the detection of glandered animals. As a preventive make-

shift this arrangement is no doubt reasonable and convenient. No one can pretend that it satisfies the conditions necessary to healthy nutrition, for we can not suppose that it will do more than condemn the carcasses of animals which are actually diseased. Until the horse is reduced by the general employment of mechanical motors to the state of a mere loungeur like the pastured ox we need not expect that any but maimed or superannuated animals will contribute materially to the food-supply of a poverty-stricken population. Bad at the best will be, for a long time to come, the sinewy meat provided by the horse-butcher. It is clear that under such conditions thorough supervision by capable veterinary officials is alone compatible with public safety. It appears to be taken for granted that all this inferior horseflesh is consumed in Belgium itself. There have been suggestions notwithstanding that this is not the case. In consideration of certain disquieting rumors which have been set afloat in the British press, we would suggest as a highly proper and legitimate subject of inquiry for the official supervisors of abattoirs the question, How much of this meat, if any, returns to the British Islands, and under what name?—*Lancet*.

OSTEOMYELITIS SIX YEARS AFTER ENTERIC FEVER DUE TO EBERTH'S BACILLUS.—Bruni (*Annales de l'Institut Pasteur*, April 24, 1896, Tome x, No. 4,) records the case of a woman, aged thirty-six, who, after passing through an attack of typhoid fever, had an attack of periostitis in the lower third of the right femur. At the same time there was some pain in the upper third of the left leg. This passed away, but at intervals returned, and for some years she was subject to attacks of dull pain, worse at night. Eventually the leg became swollen, tender, and the skin over it inflamed, and six years after the attack of enteric fever the tibia was trephined in the situation of greatest tenderness, and an abscess was opened. Bacteriological examinations of the pus showed the presence of Eberth's bacillus typhosus. Great care was taken to differentiate the bacterium coli commune from the micro-organism found in the pus. The indol reaction was negative. The bacillus found did not coagulate milk even after months, whereas the bacterium coli commune did in thirty hours. Elsner's differential tests by cultivations in various media were employed, and an adaptation of Pfeiffer's phenomenon, that is, injecting the micro-organism with antityphoid serum into the peritoneal cavity of an animal, also showed the micro-organism to be Eberth's bacillus. Experimentally the microbe was found not to possess a high degree of virulence, which is quite conformable with the fact that it had remained latent in the left tibia for a period of six years, and had given rise to an apyrexial chronic osteomyelitis resembling that due to the tuberculous process.—*British Medical Journal*.

FOR THE FADDIST.—The medical officer of health for the St. Olave District issued a report to the Board of Works for that district on the increasing neglect of vaccination in the union. In 1881 the proportion of

children, says Dr. Bond, unaccounted for in regard to vaccination (including cases postponed) in the Metropolitan unions was only 5.7 per cent of the total births. In 1891 this proportion had risen to 16.4 per cent. In the St. Olave Union the corresponding rates were 4.1 and 15.3 per cent. Of the six hundred and seventy-six cases of smallpox that were removed to the hospital ships of the Metropolitan Asylums Board during the six months ending December 29, 1895, there were one hundred and thirteen under ten years of age, and sixty-eight over ten years and under fifteen years. Of the one hundred and thirteen under ten years of age one hundred and four were not vaccinated, seven were vaccinated, and in two cases there was no history in regard to vaccination. Of the sixty-eight between the ages of ten and fifteen thirty-six were not vaccinated, thirty-one were vaccinated, and in one case there was no history in regard to vaccination. Not one of the sixty-eight patients over ten and under fifteen years of age was stated to have been revaccinated. The strongest practical evidence that smallpox can be stamped out by vaccination and revaccination is supplied by Germany, for since the year 1874 revaccination before leaving school has been compulsory, and during the last ten years smallpox has been almost extinct, being at the rate of only one case per million inhabitants; and these few cases are those of foreigners or natives who have not been revaccinated. Comment on these figures is needless, and we can only hope that when the report of the Royal Commission on Vaccination does see the light it will insist not only on vaccination but on revaccination.—*Lancet*.

PYOGENIC MICROBES.—Banzet (*Th. de Paris*, 200, 1896,) says microbes are not indispensable to suppuration, which may be caused by filtered or sterilized cultures. Koch's bacillus is pyogenic, and may cause cold or acute abscess, but a cold abscess is not necessarily tuberculous. The streptococcus is the most common agent in acute septicemia and pyemia, and tends to produce most serious, acute, diffuse processes, for example, phlegmonous and serous suppurations. It is in most cases the cause of those secondary infections which give peculiar gravity to certain primary general intoxications, for example, scarlet fever. It varies much in vitality and virulence; by the presence of other bacteria it is often made more venomous. The staphylococcus is much more stable; it gives rise to septicemia or pyemia of moderate severity, to circumscribed processes in sebaceous glands and cellular or bony tissue. Secondary infection by it is seldom very serious. The pneumococcus may be the cause of suppurations—sometimes very serious—of serous membranes, the pleuræ or meninges, joints, or middle ear. Eberth's bacillus is of secondary importance in this relation, but may cause subacute periostitis without superficial lesions. The bacillus coli ranks with the streptococci and staphylococci, and may cause acute general or various forms of local suppuration, urinary, biliary, peri-intestinal suppuration, or salpingitis. But its suppurations are of less acute character, and are less prone to extension or to affect the general system than those

caused by the pyogenic micrococci. The gonococcus is not proved to have pyrogenetic properties except as regards the mucosa of the urethra, the conjunctiva, and the female genital organs.—*British Medical Journal*.

ENLARGEMENT OF LYMPHATIC GLANDS IN ARTHRITIS DEFORMANS. Chauffard and Ramond (*Revue de Méd.*, May 10, 1896,) record seven cases of glandular affection in arthritis deformans. There is, according to P. Marie, a distinct variety or subdivision of chronic arthritis deformans called chronic infective arthritis deformans, of which the authors consider their cases to be examples. Clinically this class is characterized by a paroxysmal course with remissions, trophic changes in the skin, especially of the hands, increased sweating, muscular atrophy, and sometimes fever. The glands situated above the affected joints are enlarged, painful, and tender; they preserve their form and do not show any periadenitis. The condition of the glands varies with the joints and is secondary to that of the joints. The glands are more swollen and painful after exertion. The glands of the groin, the axilla, and the epitrochlear glands are most often affected. In two out of the seven cases the blood was examined, and the proportion of leucocytes found to be normal. The authors examined enlarged epitrochlear glands microscopically, and found fibroses but no infective nodules and no well-marked degeneration. In scrapings from the glands and in films prepared from the fluid out of an affected joint they found a short, thin, diplo-bacillus, staining readily and not decolorized by Gram's method; attempts to cultivate it failed. The bacillus found in arthritis by Max Schuller differed from the one found by the authors, and closely resembled the bacillus prodigiosus. The authors considered this glandular enlargement of value in the diagnosis of the infective form of chronic arthritis deformans.—*Ibid*.

THE SURGICAL TREATMENT OF RUPTURE OF THE UTERUS DURING LABOR.—Dr. W. H. Krajewski has had to deal with uterine rupture in labor on five occasions: in three instances the rupture was complete, and in all these he performed total hysterectomy by abdominal incision, with two recoveries and one death; in the remaining two cases the tear was incomplete, and in one of these Porro's operation was carried out with a fatal termination, while in the other the surgical interference consisted in an extraperitoneal incision, with a favorable result. It is with the last named case and its treatment that the paper now under analysis is concerned. The patient was a x.-para, forty-four years of age, and the cause of the rupture was a neglected shoulder case, with prolapse of an arm. The child was extracted and a tear admitting four fingers was found on the right side above the vaginal portion of the cervix. This was plugged with iodoform gauze, and the woman was brought into hospital to be under the care of Dr. Krajewski. The diagnosis of a rupture of the cervix and right vaginal fornix, probably without any lesion of the peritoneum, was made. It was also evident that an extensive hemorrhage had taken place into the subperitoneal cellular

issue. The patient having been anesthetized, the extraperitoneal incision of Bardenheuer was made. The muscular layers of the abdominal wall were divided, and the peritoneum exposed and separated on the right side from Poupart's ligament. Scarcely had the right iliac fossa been thus opened into when a mass of blood, partly fluid, partly clotted, was forcibly expelled. The large subperitoneal cavity was cleared out, and bleeding points were ligatured (the ligation of the ruptured uterine artery was a very difficult matter), and the cavity and the interior of the uterus, with which it communicated, were packed with iodoform gauze and drained, both externally and per vaginam. The result was most satisfactory, and Dr. Krajewski therefore recommends this line of treatment in cases of partial rupture of the uterus with the subperitoneal effusion of a large quantity of blood which increases notwithstanding vaginal plugging. Where the rupture is complete and infection is suspected, or where the margins of the tear can not be exactly adapted, or where the rupture involves the broad ligaments, laparotomy with total hysterectomy is indicated. In a few cases laparotomy with suture of the uterine wound is the correct procedure; the indication being strict antisepsis during the labor and the absence of any involvement of the broad ligaments.—*Przegląd Chirurgiczny; Edinburgh Medical Journal.*

LOCAL TREATMENT IN GOUT.—Dr. William Murrel writes to the *Lancet* of a local method of treating the acute manifestation of this affection which he has employed with success: "I will give the formula in full. I take half an ounce of iodide of potassium, dissolve it in half a pint of rectified spirit—methylated spirit is used in hospital practice—add one ounce of soap liniment, and then half a dram each of oil of cajeput and oil of cloves. A piece of lint is soaked in this mixture, wrapped round the affected part, covered with protective and kept in place by a bandage. It acts as a powerful counter-irritant, and the inflammation usually subsides in from twelve to twenty-four hours. In addition I not uncommonly give a dram of colchicum wine with ten grains of iodide of potassium three times a day. These large doses of colchicum wine induce brisk purgation, sometimes accompanied by vomiting, but they speedily cut short the attack. This mode of treatment is especially useful in the case of robust, full-bodied men in active employment, to whom the loss of a day's work is a serious consideration. In sciatica, lumbago, and rheumatism affecting one joint the local application of a liniment containing half an ounce of salicylate of sodium, half a dram of oil of cajeput, fifteen minims of oil of eucalyptus, and half an ounce of soap liniment in six ounces of rectified spirit affords prompt relief."

THE PREPARATION OF ANTITUBERCULOUS SERUM AND ANTITOXIN.—Maragliano (*Il Policlinico*, May 15, 1896.) describes his method of preparing antituberculous serum. One series (A) is obtained by concentrating the tuberculous material at 100° C., the other (B) by filtration through a Cham-

berland filter at a temperature under 30° C. Series A contains the bacterial proteins, the tuberculin; Series B, bacterial secretions—that is, toxalbumins and a small quantity of tuberculin. The toxalbumins contain principles which have a sudoriparous and hypothermal action, but which can not be separately isolated. For inoculation the author uses a mixture of the two series in the proportion of three parts of A and one part of B. The initial dose is two milligrams per kilogram, increasing daily up to forty milligrams. The horse gave the best results, and usually required six months of treatment to give a good quantity of antitoxin. The antituberculous power of this antitoxin is even shown for guinea-pigs and men. The minimum quantity of tuberculin capable of giving rise to fever in an apyretic tuberculous subject is neutralized by one c. cm. of the serum. Tuberculous subjects susceptible to tuberculin lose this susceptibility after a series of serum injections, even when given in ten times larger doses. *In vitro* the serum is bactericidal with regard to the tubercle bacillus; one c. cm. of the serum protects one kilogram of healthy guinea-pig from doses of protein which would otherwise be surely fatal, and this is taken as a standard serum. *British Medical Journal.*

DEATH OF DR. C. A. LEWIS.—At the regular meeting of the Hardin County Medical Society, held in Elizabethtown, July 2, 1896, the following resolutions on the death of Dr. C. A. Lewis were read and adopted:

WHEREAS, In the death of Dr. C. A. Lewis, of Glendale, Ky., this society has lost a valued member, the community a most excellent citizen, "the highest type of a Christian gentleman," therefore be it

Resolved, That we, the members of the Hardin County Medical Society now assembled, extend to the family and relatives of the deceased our deepest sympathy for their loss; and further, that a copy of these resolutions be spread on the records of the Society, and that the same be published in *The American Practitioner and News*, the *Elizabethtown News*, and *Hardin Independent*, and that a copy of the same be sent to the family.

J. W. O'CONNOR, M. D.,

J. T. SELBY, M. D.,

E. WARFIELD, M. D.,

Committee.

FOREIGN PRACTITIONERS IN FRANCE.—In spite of the very stringent nature of the provisions of the law, which recently came into force in France governing medical practice in its application to foreigners, a patriotic member of the Chamber of Deputies recently addressed a question to the government, in which he complained that permission to practice medicine in France was accorded to foreigners who did not possess a French degree. The Minister of Public Instruction is reported to have admitted that many foreign practitioners had established themselves in France, and promised to endeavor to find a means of preventing the competition.

Chamber adopted an order of the day requesting the government to frame a bill dealing with foreign students, a matter which had also been raised by the same member of the Chamber.—*British Medical Journal*.

A USE FOR PATENT MEDICINE LITERATURE.—It is a favorite axiom of the optimists that every thing has its uses. But it has remained for the New Mexico Territorial Board of Health to find a new use for the patent medicine almanac. In a recently issued circular on the prevention of consumption, among other things, it advises that "every person so affected should spit into some receptacle and should see that the sputum is soon destroyed by fire. About the house there is no better way than to spit between the leaves of patent medicine almanacs—to be had freely at all drug-stores—and after a half dozen or more spittings, burn the book."—*The Journal American Medical Association*.

A JENNER RELIC.—The immortal Jenner was a many-sided man, but outside the profession is best known as "the man who invented vaccination." An interesting relic of the "person" of Jenner has been presented to the Royal College of Surgeons in the shape of Jenner's silver lancet-case and lancets. The donor is Mr. E. Wadams of Great Malvern, and the relic was presented to him by an old patient whose grandfather was Jenner's assistant. This case bears Jenner's initials and the lancets his name, and it can be seen in the Museum of the College along with the other Jenner relics.—*Lancet*.

NATIONAL CONSUMPTION OF FLESH.—The Economic Journal prints an article contributed by Prof. F. S. Nitti, giving the annual consumption of fresh meat per inhabitant, as follows: United States, 120 pounds; Great Britain, 105 pounds; France, 74 pounds; Germany, 69 pounds; Belgium, 69 pounds; Holland, 69 pounds; Scandinavia, 67 pounds; Austria, 64 pounds; Spain, 49 pounds; Russia, 48 pounds; Italy, 23 pounds.

ANGINA PECTORIS.—From a study of forty-three cases I have reached the conclusion that this affection is a sympathetic neurosis, bearing much the same relation to the sympathetic nervous system as epilepsy does to the brain. Heart lesions and coronary disease are often absent, and when present are probably merely coincidental.—*Sir Benj. Ward Richardson, in the Asclepiad*.

RETREAT FOR CONSUMPTIVES.—The Sisters of Mercy have nearly completed their retreat for consumptives in the Adirondacks. "Sunrise Mount" is the name they have given it. It is two thousand feet above sea-level, and is surrounded by miles of pine forests.

THE Rhode Island State Board of Health has been granted an appropriation of \$1,000 for the suppression of tuberculosis.

Special Notices.

DIET IN GASTRO-INTESTINAL DISORDERS.—In the treatment of affections of the gastro-intestinal tract the problem of diet is one that at once presents itself for solution. When it is considered that in these conditions the digestion is always more or less impaired, the importance of administering food which, in small bulk, contains a large amount of available nourishment is readily understood. Foods containing a large amount of inert material will impose more work upon the crippled digestive organs, and thus directly increase the existing disorder. On the other hand, foods containing nutritive matter that is difficult of digestion will be equally objectionable. There is abundance of evidence to show that in the form of albumoses, albuminous foods are most readily digested and assimilated, so that a product consisting essentially of albumoses is best adapted for the nutrition of persons suffering from digestive troubles. Up to the time of introduction of Somatose there was no preparation in the market consisting of pure albumoses without undesirable admixtures. In Somatose the albumins exist in a form best adapted for immediate digestion and absorption, and for this reason this preparation has been widely recommended in the dietary of persons suffering from gastric catarrh, cancer, and ulcer of the stomach, cholera morbus and infantum, etc. Its ready solubility in all ordinary fluids, tastelessness, render its administration both agreeable and convenient, while its freedom from irritating effects on the stomach permit of its use even in cases in which other foods are not tolerated owing to the nausea, vomiting, and distress to which they give rise. Somatose can therefore be justly considered as an important addition to the diet of persons affected with maladies of the digestive organs.

IN CASES OF PERNICIOUS, PROGRESSIVE ANEMIA IN YOUNG GIRLS, no matter from what cause, Dr. Mary Ward Mead, Camden, Ill., writing, says: "The arrest of development of the generative organs retards cure. I am early on the track for a speedy development in those slow puberty cases—and when I see the dormant spot puff for a mammary gland I know that restoration will surely follow—and to arouse this slumbering sympathetic and vaso-motor system Sanmetto is truly great."

JUSTIN HAYNES, M. D., Western Springs, Ill., says: "I have a patient in my Sanitarium who has scanty and painful menstruation; she is now taking her third bottle of Aletris Cordial with marked beneficial results. I have prescribed it for a number of patients outside of my Sanitarium, and consider it a very valuable remedy for the conditions for which it is recommended."

LABOR SAVING: The American Medical Publishers' Association is prepared to furnish carefully revised lists, set by the Mergenthaler Linotype Machine, as follows:

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THE AMERICAN PRACTITIONER AND NEWS

"*NEC TENUI PENNĀ.*"

VOL. XXII.

LOUISVILLE, KY., AUGUST 8, 1896.

No. 3.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—*RUSKIN.*

Original Articles.

CHRONIC BRIGHT'S DISEASE (LARGE, SMOOTH, WHITE KIDNEY).*

BY E. S. SMITH, M. D.

In 1827 Dr. John Bright, of England, in "a report of medical cases," taken from Guy's Hospital, London, first made a public statement calling attention to the constant association of certain forms of anasarca and general dropsy with organic disease of the kidneys. This announcement made by Bright was a startling event in the medical history of that day. It was not long after Bright made this discovery until observations were being carried on by some of the most competent men in Europe. Their investigations corroborated Bright's views and forever associated his name with the disease. In his first description of the malady he approximated very closely some of the pathological processes connected with the disease as held by more modern pathologists. In speaking of the classification of the disorder he seems to have realized the same difficulty that authors of the present day have had, "for," says he, "it may be that the first form of degeneracy to which I refer never goes much beyond the first stage, and that all the other cases, together with the second series and the third, are to be considered only as modifications and more or less advanced states of one and the same condition." This same question of unity or plurality of the disease has disturbed the minds of pathologists from that day until this. Frerichs considered it as one disease, and that it was inflammatory in

* Read at the June meeting of the Kentucky State Medical Society, 1896.

its nature, possessing three stages of the same pathological process. Virchow based his classification of the malady upon the grounds that the kidney is composed of three primitive structural elements, viz. tubules, capillary vessels, and fibrous stroma or connective tissue; and that the disease may primarily affect any one of these tissues. Accordingly he designated inflammation of the kidney under three heads with regard to the tissue primarily involved. When seated in the tubular structures he called it parenchymatous inflammation; when the vascular network, including the Malpighian bodies, were the primary seat of inflammation he called it amyloid disease; when the fibrous stroma was the primary location of the disease he called it cirrhosis of the kidney.

Notwithstanding that, a great deal of painstaking and careful research has been made with a hope that we might reach a definite opinion and be able to make a classification of the disease that would accord with the different pathological conditions found to exist; but so far we have not been able to formulate a classification that has met with the full approbation of all. The weight of testimony, however, is at present in favor of several distinct varieties of the disease, which cannot by any gradation run into each other, although they may be and frequently are associated in the same kidney.

Now, at the time that Bright wrote of the disease and for some time afterward it was considered a local disorder in all its varieties and forms. Rokitsansky was the first to disturb the equilibrium of medical opinion in regard to its origin. In about 1838 he wrote an essay in which he advocated the constitutional origin of the disease; many eminent men soon coincided with him in his opinion, then followed an array of intellectual forces upon both sides taking part in the great question.

Dr. George Johnson says: "Chronic Bright's disease is a constitutional malady characterized by a morbid state of the blood, which first leads to pathological changes in the secreting cells of the kidneys, and secondly to alterations of the blood-vessels in the kidneys and other organs." Semmola says: "The disease is not essentially a renal disorder, but a general morbid alteration of nutrition." DaCosta and Longstreth say that "it is a disordered nutrition, fixing the origin of the changes or starting point in the nervous ganglia and in the parts of the nervous system controlling the nutrition of the textures."

Tyson is of the opinion that Bright's disease is a part of a general condition involving the vascular system throughout the body, including the kidneys. He regards the changes in the intima as being essential

inflammatory, the results of irritation coming from a morbid material circulating in the blood, but he regards the changes in the middle coats of the artery to be due to a true hypertrophy. Meigs agrees with Tyson in regard to the nature of the changes taking place in the intima, and thinks the changes in the middle coat can be assigned to the same cause. Fothergill says: "It is primarily a blood disease induced by impaired digestion and retention within the blood of effete products of tissue metamorphosis."

After this general consideration of the disease we will pass to that special form known as the large, smooth, white kidney. This consists essentially in an inflammation of the tubular structures of the kidney; it may supervene upon the subsidence of an acute attack, or may be chronic from its beginning. The morbid anatomy as given by Roberts is about as follows: The organ is found to be enlarged, with perfectly smooth surface, capsule loosely adherent, and the uriniferous tubes greatly distended and enlarged from an increase in the epithelial lining; they sometimes contain exudations of fibrin and blood, the cells are swollen, generally opaque and granular and often loaded with oil. As the disease advances many of the tubes and their contents are broken up into a granular debris and destroyed. As a general rule the inter-tubular structures remain unaffected, the Malpighian corpuscles are but slightly if at all changed, their capsules remain as thin as in the normal kidney. These characteristic features are retained throughout the disease.

The various forms of chronic Bright's disease have a line of symptoms common to all; these are such as albuminous urine with deposits of tube casts and renal epithelium, frequent micturition, especially at night, dropsical effusions into the subcutaneous cellular tissue, serous cavities, brain or pulmonary substance, dryness of skin, derangement of the alimentary tract, uremic phenomena, such as headache, disturbance of vision, convulsions, and coma, hypertrophy of the left ventricle, inflammation of the serous membranes and internal organs with progressive hydremia. Having so many symptoms in common the question naturally follows: Have we any special features connected with the symptomatology of the disease that will enable us to differentiate between them? I must answer in the affirmative. The features of the form now under consideration are toleably certain and constant. I shall call your attention to what I consider some of the more prominent and marked characteristics of this form of the malady: first, the large,

smooth, white kidney is that form of the disease which most frequently follows an acute attack. Dropsy is more frequent in this than in any one of the other chronic forms. The dropsy is not confined to any particular tissue, but often changes capriciously from one locality to another part of the body.

Johnson, in his report of fatal cases of parenchymatous nephritis, says "dropsy occurs in ninety-two per cent of the cases dying from the large, smooth, white kidney." Upon this one symptom alone Johnson was led to remark, "It is difficult to understand how it can be that if it is, as German authorities claim, the disease is a unity and the granular kidney is the final or later stage of the large, smooth white kidney, how those patients reaching the final stage and dying should happen to escape the dropsy, while nearly all those who die in what is assumed to be the earlier stages should suffer from it." Now the changes occurring in the blood are prominent in the large, smooth white kidney, and lend the characteristic feature to this form of the disease. Notably the face is pale, the cutaneous surface conspicuously white, smooth, and glossy. In other words, there is an intense hydremic state of the blood, it becomes more watery, poorer in albumin and red blood corpuscles; while urea, uric acid, the extractive matters, and white corpuscles are relatively increased.

Dr. Christison, in speaking of this peculiar deteriorated state of the blood, says: "I am acquainted with no disease of a chronic nature which so closely approaches hemorrhage in its power of impoverishing the red blood corpuscles." Another distinctive feature of this class of the disease is the frequent occurrence of the so-called uremic phenomena, such as headache, defects of sight and hearing, convulsions, coma, etc.

The manner in which these symptoms are brought about has been a subject of much dispute. Triplett says: "The urea theory of Dumas and Prevost, which gave them a name quite generic, has not sustained the hopes it had excited." "Further," says he, "properly speaking, there is no such thing as toxic results purely and solely chargeable to an abnormal amount of urea in the blood." He further expresses doubt as to whether or not the so-called uremic phenomena are due to any poison in the blood, and says that "there are convulsions at times having a renal origin no one will deny, but that they result from incitation of a specific poison, especially urea, is more than doubtful. It would seem to be a more logical question to call for the great absence of con-

vulsions in Bright's disease. Ninety cases in the one hundred are not so affected; absence of such manifestations is the rule, convulsions constitute the exception. So potential an agent should be followed by more uniform results."

Frerichs was the next to come forward with an explanation of these symptoms; he maintained that urea of itself was harmless, but that the symptoms depended upon the transformation of the urea in the blood into carbonate of ammonia. Trietz also thought that carbonate of ammonia was the poisonous agent, but believed that the urea was first vicariously excreted into the alimentary canal, where it was rapidly converted into carbonate of ammonia and absorbed into the blood. This ammonia theory of Frerichs was exploded when Richardson and Hammond found that carbonate of ammonia naturally existed in the blood of healthy animals, and failed to discover a larger amount in the blood of animals rendered uremic than existed in a healthy state.

Dr. Oppler afterward contended that the nervous phenomena were not due to either urea or carbonate of ammonia, but to the retained products of muscle waste, which the kidneys were no longer able to filter from the blood. Since that time experimenters have injected first one substance and then another obtained from the urine into the blood with entirely negative results; and as a matter of fact, after a most careful investigation by competent men, it was found that the potash salts were the most powerful toxic constituents of the urine. The great diversity of symptoms met with in cases of so-called "uremic poisoning" will be difficult to explain, says Broadbent, upon the hypothesis of any poison circulating in the blood. If there was any uniformity of symptoms prevailing throughout a single case, another set of symptoms in another case, it would be good reasoning to suppose that each case might result from a certain kind of urinary impurity, but such does not occur. We may have many different characters of symptoms, either excitant, convulsant, or narcotic, rapidly succeeding each other in the same case. When we consider that these nervous symptoms of Bright's disease belong almost exclusively to the dropsical variety we are at once struck with the probable correctness of the explanation of their presence as offered by Traube. He claimed it as a law of the disease to have an unaccountable tendency to serous effusions into various regions of the body; consequently he refers, and I believe it to be the most correct explanation hitherto offered, to the fact that the nervous symptoms are due to a cerebral transudation or edema, producing by compression of

the smaller blood-vessels of the brain an intense anemia of the structures.

In accounting for the diversity of symptoms present in these cases he says: "If the effusion be in the subarachnoid space over the cerebrum there will be coma; if at the base of the brain in the vicinity of the great ganglia, convulsions will follow; if there be both coma and convulsions, the effusion is inferred to be general." Again, another significant fact in this connection, the most effective plan of treatment adopted for the relief of these nervous symptoms is that which relieves edematous conditions. Then it is that this theory becomes more firmly fixed as the correct explanation of the dominant features as observed in so-called cases of uremic poisoning.

In the management of these cases of chronic Bright's disease it is proper that we should consider the subject under three separate heads: first, the prevention of a further extension of the disease; second, the relief, if possible, of the organic changes present; third, the relief of the troublesome symptoms.

Under the first head will be included the ascertaining, if possible, the cause of the disorder and its removal. This may often be done, and when the disease is found to be due to the intemperate use of alcohol or long-continued exposure to cold and wet. The patient should be instructed in the necessity of living a smooth, quiet, temperate life with freedom from worry or excitement, plenty of fresh air, moderate outdoor exercise, when the conditions of the atmosphere will permit to go comfortably clad, and when practicable to reside in an equable, warm, dry climate. Diet plays an important rôle in the management of these cases. I believe that all are pretty well agreed that a rich, highly nitrogenized food can only result in doing the patient harm, while, upon the other hand, a limitation practically to a milk diet has been attended with some brilliant results; under its use the flow of urine will be increased, there will be a more abundant discharge of the urea and other tissue waste products, while the amount of albumin will be seen to diminish and the dropsy and anasarca disappear. Therefore we should always recommend our patients to live as largely as possible upon a milk diet. In those cases that from one cause or another can not take a milk diet we may with advantage substitute for it dishes whose base is milk, to which various vegetables are added.

The second indication in the treatment of these cases has not given us as satisfactory and definite results as we would hope for, although

cases have been reported from time to time as cured by one kind of treatment or another. Some physicians think highly of bichloride of mercury in doses ranging from one thirty-sixth to one eighth of a grain. Dr. Thomas H. Pope reports five out of fifteen cases of chronic parenchymatous nephritis treated with it as cured. Some have advocated the long-continued hypodermic use of large and increasing doses of pilocarpine, a method of treatment that seems to me to have but little recommend it. More recently the Italian physicians have brought strongly before the profession fuscin as a remedy of great value in these cases.

The third indication in these cases is to control alarming and troublesome symptoms. Derangement of the alimentary canal is a frequent source of discomfort to these patients. This can usually be relieved by remedies in general use for controlling the same symptoms originating from a different cause; those to be recommended are such as dieting the patients, small bits of ice held in the mouth, bismuth, oxalate of cerium, creosote, and opium. The profound anemia present in these cases will be best combated by the judicious use of iron, either alone or in combination with such tonics as cod-liver oil, arsenic, and strychnine. Dropsical effusions into various parts of the body will often call for treatment.

Concerning this symptom the great Sydenham said: "The curative indications are to evacuate the water and strengthen the blood." In controlling this feature of the disease we must call into action the three main excretory organs of the body, viz., the kidneys, the skin, and the bowels. In cases of ordinary severity I believe we can get the most satisfactory results from a judicious use of digitalis combined with acetate or citrate of potassium; the infusion will usually give better results than other preparations. Trousseau's wine makes a good combination in many of these cases. Dr. Babcock, of Chicago, recommends very highly diuretic as affording great relief from the dropsical effusions of renal disease. Other diuretics that have been found useful are caffeine, strontium acetate, and scoparius. When the effusion becomes too great or from its locality promptness of action is required, we must call into action the accessory organs to help the kidneys. Hydragogue cathartics are prompt in their action and serve a useful purpose; for general use jalap and bitartrate of potash are excellent remedies. If these should fail, elaterium may give good results. One fact, however, should not be forgotten, in giving any hydragogue

cathartic in these cases, that these patients are sometimes carried off by an obstinate and uncontrollable diarrhea.

Diaphoretics, of these only one deserves to be mentioned in connection with these dropsical effusions. Warm baths in the form either of hot air, hot steam, or blanket bath will be found the most efficient and at the same time the safest method at our command for exciting a free diaphoresis. In a certain per cent of these cases we will fail to relieve the dropsy by the methods above enumerated. Under such circumstances we should resort to incisions in the skin, or to the use of Southey's drainage-tubes, or to the tapping of serous cavities. In the management of these cases we should not forget that quietude and rest always play an important part. It alone will often do much toward relieving the distressing symptoms.

When nervous symptoms supervene we should lose no time in adopting measures for their speedy relief. While there has been much diversity of opinion as to the probable origin of these phenomena, the treatment adopted for their relief has been tolerably uniform. Some facts worthy of our observation in this connection are the forcible action of the heart, the high tension pulse, and most usually the edematous condition of the patient; that any one or all of these may be and most probably is a factor in the production of these nervous phenomena must be admitted by all. Consequently, to get at a rational treatment of these symptoms we should take into consideration and look to the relief of those factors that are responsible for the patient's condition. A noteworthy fact and a fortunate circumstance is that the same class of remedies is useful for the relief of all these factors; perhaps the most energetic and quickly acting remedy to relieve the immediate symptoms is venesection. It is a powerful means of warding off the threatening danger; however, it is only admissible in those patients who are possessed of a fair degree of vitality and a good constitution. Hydragogue cathartics attain for their end a relief of edematous conditions and a lowering of arterial tension. For that reason they are both prompt and effective in the treatment of the so-called uremic symptoms. We will find that calomel in large doses combined with jalap is perhaps the ideal hydragogue for this purpose.

Diaphoretics give much the same results as the hydragogues. Under their full physiological action arterial tension is reduced and dropsical conditions relieved. Under this class of remedies we include the various forms of hot water baths and the hypodermic use of pilo-

carpine, either of which or both will be found useful. If convulsive movements predominate we should make a free use of such remedies as hypodermic morphia, chloral, and in extreme cases to chloroform. The kidneys should be prompted to a free action by the use of saline diuretics and external heat applied over the loins.

HODGENVILLE, KY.

CHRONIC INTERSTITIAL NEPHRITIS : DIAGNOSIS—TREATMENT.*

BY GEORGE E. DAVIS, M. D.

Probably the most fertile source of unsuccessful treatment is erroneous diagnosis. The physician is unfaithful to himself and unjust to his patient who does not insist on a thorough examination.

The failure in diagnosis often has been due, not to the physician's having drawn incorrect conclusions from diagnostic means, but to not having brought these means fully into action and properly applying them to the solution of the case in hand. There are circumstances, however, calculated to mislead even the most careful physician. The conditions attending the initiation of chronic Bright's, especially of the granular variety, often are obscure and elusive. The clinical signs may fail to give the true index to the grave pathological changes, and ere we realize the true condition of affairs perhaps our patient has suffered irreparable injury and our reputations have been not a little impaired. Therefore you will pardon me if I trespass on your patience by insisting on calling your special attention to the early symptoms; but because of the serious consequences liable to result from delayed diagnosis it becomes of deep interest to the physician and grave importance to the patient that not only an accurate but a *timely* diagnosis be arrived at, for upon this depends whether correct management of the case be early enforced and sound treatment instituted, and directly and necessarily upon the latter depends not only the patient's present safety but his future comfort, happiness, and usefulness. Without it his destiny is as a sealed book, for as Millard truthfully avers, "in advanced cirrhosis . . . recovery or a cure is not to be looked for."

But, insidious and protean as are the approaches of chronic Bright's disease, its advances are not entirely unannounced to the observant

*Read at the June meeting of the Kentucky State Medical Society, 1896.

physician who, consulting his experience, is advised that while the symptoms taken singly may not be characteristic, yet when taken collectively they are of diagnostic if not of pathognomonic import. Some of the earliest symptoms that should cause us to suspect Bright's disease are often apparently trivial, and perhaps not susceptible of classification on account of their great variations in different cases, and even during the course of an individual case, but so significant are they that they are often sufficient to establish a diagnosis. In a series of sixty cases reported by Dieulafoy more than half of them complained of whistling or sonorous noises in one or both ears, and about one fourth of them suffered from vertigo. Asphyxia of the extremities, characterized by formication, pallor, and numbness, is a very common early symptom and occasionally is accompanied by severe itching. Sensitiveness to cold and insensibility to heat, especially of the lower extremities, nocturnal cramps in the calves of the legs, and sudden startings, so violent as to arouse the patient, are not without significance. Arterial tension is often increased and may be indicated by the temporal sign. These symptoms when associated with decreased toxicity of the urine are strongly indicative of Bright's disease.

In another series of cases the first indications may be gradual loss of flesh and strength, anorexia, incapacity for mental or physical exertion, great and constant weakness, insomnia extending over weeks and months, and persistent headache.

Frequent chemical examinations of the urine may reveal no abnormality, save decreased toxicity and reduced specific gravity. Microscopical examination, however, may reveal casts; and the presence of the latter, even in the smallest numbers and of whatever variety, regard ominous always.

Again, the first signs may be referable to the alimentary tract. Nausea is more or less constant; occasional vomiting occurs, especially early in the morning; there is pain over the epigastrium; and craving for constipation, and flatulence are annoying symptoms. These patients do not sleep well—are restless, irritable, and nervous.

Dyspnea is sometimes the first symptom to direct our attention to kidney trouble, and is due to a toxic effect on the nerve centers of respiration. In conjunction with dyspnea there may be a harassing cough, cardiac palpitation, and a weak pulse. I regard the latter of greater value as a very early symptom than slightly increased arterial tension.

Still other prodromic symptoms of importance are occasional and transitory edema, intractable neuralgias, disorders of vision, temperature variations, sometimes marked, night-sweats, disturbances of speech and memory, increasing anemia, malaise and general decline in health, associated at first with diminution of urine, but later with increased amount of urine and increased frequency of micturition.

The presentation of any of the above clinical features, especially if occurring in middle or late life, should counsel a careful chemical and microscopical urinary examination. Great difference of opinion is indulged by authorities as regards the diagnostic importance implied by the presence or absence of albumin and casts in the urine. In the past albumin has played a very prominent rôle, and far too little importance has been attached to the morphological evidences of kidney disease furnished by the latter. I am pleased to note that recently the microscope is being much more generally employed and recognized as of prime importance as a diagnostic means, while the chemical tests are being less relied upon.

Millard does not believe that physiological or normal albuminuria exists, but does not hold the idea, still current to-day, that the absence of albuminuria precludes nephritis. Though albuminuria is a very common symptom in Bright's disease, this coincidence may be lacking, especially in the early stages, and sometimes throughout the course of the disease; albuminuria and Bright's disease therefore are not necessarily of correlative significance of like pathological renal changes.

Notwithstanding Millard's disbelief in normal albuminuria, Edes, Bremer, Stirling, and others are of the opinion that a number of conditions within physiological limits may be associated with albumin in the urine. Some of these conditions are, a full meal, severe exercise, pregnancy, etc. Stirling reports his experiments in examining three hundred and sixty-nine boys between the ages of sixteen and twenty, who belonged to big training ships on the Thames. He found albumin in the urine most common after the boys got out of bed, when the percentage of the number of boys whose urine contained albumin was about twenty per cent. Stirling stated that the urine was usually found to be absolutely free from albumin while the boys remained in bed, and made its appearance a short time after the assumption of the erect posture, and independently of food and other conditions.

The same conflicting opinions exist as regards the significance of the presence or absence of casts in the urine as a symptom of renal cir-

rhosis as obtains in regard to the presence or absence of albumin. While the majority admit that casts may be absent; especially in the early stages, yet there are many good authorities who do not attach positive diagnostic importance to their presence. Delafield says that "occasionally hyaline casts are found in the urine of healthy persons," and that muscular exertion may be responsible for their presence. Flint, Ede and others attribute their existence sometimes to no more serious morbid process than venous congestion. Tyson and Millard attach great diagnostic importance to the presence of casts, and consider that the constant or periodical appearance even of hyaline casts, with or without albumin, as significant of structural renal changes of an irritative or inflammatory nature.

In my opinion the reduced toxicity of the urine, that is, a diminution of its solid elements as urea and uric acid, etc., showing that the waste products of metabolism of the body are not being eliminated, is of equal or greater significance of early renal changes than albumin or casts. Daily tests for weeks or months may fail to reveal albumin, and a microscopical examination for casts may likewise prove negative, and for several reasons, as noted by Bremer: (1) Microscopical insufficiency; (2) the kidney trouble may have become latent, the casts are really absent; (3) in spite of competency the casts are not detected because of insufficient instrumental equipment. No examination of this sort ought to be considered as final without the use of the centrifuge; (4) the examiner, even if he finds casts, may not attach any importance to them if unaccompanied by albuminuria. This is an error of vital importance.

Before referring to treatment, I wish to report a single case illustrative of the great variations of the clinical picture during the course of renal cirrhosis, and of the aid to diagnosis furnished by chemical and microscopical examinations of the urine.

A woman eighteen years of age, primipara, was delivered March 1888, of a seven and one half months' fetus. She was dropsical to the point of anasarca two months before labor, and suffered intensely from dyspnea, having to sit up to sleep. She suffered severe headache after confinement, vision and speech were impaired, she had puerperal mania for several days, and was two or three months getting up. I was unable to get a history of the condition of her urine during this period. She came under my observation April 30, 1893, and that day, while in apparently perfect health, on arising, and while dressing, she became sud-

denly unconscious, and remained so for twenty-four hours. In the mean time she had slight convulsive movements of the voluntary muscles, and vomited frequently. The urine was scanty, high-colored, low in specific gravity, and showed a trace of albumin. After the uremic attack passed she gradually improved, and was convalescent in three weeks. From this date she ceased to improve, in fact lost weight, became pale and anemic, occasionally had edema of the feet and face, continued constantly weak, did not eat or sleep well, and suffered from nausea, flatulence, headache, and severe intercostal neuralgia in left side more or less constantly. The amount of urine passed daily was sixteen to twenty ounces of low specific gravity, and contained a trace of albumin occasionally. Some hyaline and granular casts were usually present. In November, 1895, she underwent a great physical and mental worry nursing a relative, and on December 3d, after some exposure in open air, she developed gripe symptoms in the evening, with very sore throat and much dyspnea. The sense of suffocation rendered her anxious and restless. The skin was hot and dry, there was cardiac pain, temperature was elevated, and the pulse rapid and weak. The amount of urine passed in the next twenty-four hours was four or five ounces of a specific gravity of 1010, and toxicity much reduced. There was only a trace of albumin, but hyaline and granular casts in good numbers. The dyspnea and sore throat proved stubborn for a week, and the pain in left side and about the heart persistent. After the first week the urine increased to thirty or forty ounces daily, and the patient felt comfortable with the exception of the cardiac pain. Still, the prostration was marked and she remained extremely weak, requiring over two months to quit her bed and nearly three months to leave her room. From this time she convalesced more rapidly and gained twelve pounds in eight weeks. April 21, 1896, after taking a short ride on railway, she felt some nausea and cramping in stomach, and cardiac pain. These symptoms were exaggerated in the evening, accompanied by great restlessness, twitching of face muscles, numbness of entire surface, and slight general muscular spasm. For the first six hours of this attack the urine was increased and she suffered from diarrhea. The next evening the above symptoms returned and she suffered two severe convulsions and several light ones. The diarrhea checked, and the urine was almost suppressed for twenty-four hours, only about three ounces being voided. Urea and uric acid were diminished in the urine, and, although there was not a trace of albumin, casts were not wanting.

Vigorous eliminative treatment and rigid milk diet relieved the convulsions, and the patient has once more convalesced. She is in a bad way, however, and doubtless uremia will claim her as a victim, and at no distant day.

Treatment. As regards treatment I am sorry to say that it has made little progress in a long while. But art is long. Mercury and the iodides of all therapeutic measures perhaps exercise the most favorable influence on renal sclerosis. Otherwise our efforts are directed principally to advising favorable hygienic surroundings and proper dietary, and in combating the multiple complications as the symptoms of the individual may indicate, for in this respect every case is a law unto itself. But I may note here that the failure of therapeutic resources is not altogether due to the inadequacy of drugs, but too often, I fear, to the ignorant exhibition of many with whose physiological action we have not been careful enough to become thoroughly acquainted. How few, how less than few! bear this constantly in mind and remember when prescribing digitalis in renal sclerosis that it has almost no essential effect over the kidney structure itself, that it relieves renal insufficiency by increasing arterial tension and by stimulating and toning the heart and arteries, and that its best results are secured by giving large doses at long intervals, say once daily, and preferably at bedtime. How many remember that to maintain the physiological effect of strophanthus when administered alone, that it must be repeated as frequently as eight hours, yet when combined with digitalis the same effect may be maintained for twenty-four hours, admirably supplementing its cardiac effect and at the same time stimulating directly the kidneys!

The danger of renal insufficiency is what every patient with chronic Bright's disease has most to fear, and water as a safe and efficient promotor of renal secretion is the best diuretic. The copious and prolonged use of the natural alkaline mineral waters, aside from their beneficial effect over digestive disturbance, have an essential influence as diuretics that equal volumes of distilled and other waters do not. I can offer no satisfactory explanation for such physiological action unless it may be by neutralizing the uric acid and toxic condition of the blood it relieves irritation of the circulatory centers and the kidneys resume their function. Tatham's water has a marked influence in this direction and has given me good results in some cases; however, I am free to admit its failure in others.

Citrate of lithia, five grains, thrice daily, in conjunction with digi-

talis and strophanthus, administered as indicated above, is a powerful diuretic. I have gotten happy results from it when other diuretics seemed inert.

Elimination by the kidneys should be supplemented by stimulating the functions of the skin and bowels. The skin should be protected by warm clothing. Daily sponging with hot salt water is indispensable. Especially valuable are these measures when vapor baths for any reason can not be employed.

Far from unanimous are the opinions of authors as regards the influence of various diets in chronic Bright's. The chief virtue in a strict milk diet probably is the large per cent of water contained therein, which causes an increased quantity of urine. However, the specific gravity is lowered and the amount of albumin increased. On the other hand, a farinaceous or a full diet, including fish, meat, and eggs, while they may not increase the quantity of urine as much as a milk diet, they lessen the albumin passed and thereby better conserve the nutrition and general condition of the patient.

To combat anemia and repair the nervous system, a combination of the bromides of gold and arsenic, or bromides of gold, arsenic, and mercury, or bromides of gold, arsenic, and strontium, are very efficient. To produce sleep and quiet restfulness, bromide of soda in full doses at bedtime usually answers, but if further assistance is needed chloral, preferably by enema, is most efficient.

Rest as a curative agent can not be overestimated, and to the degree we can persuade our patients to observe rest of body and mind—to the degree they approximate absoluteness—to that degree can we hold forth the hope of prolongation of life and ultimate relief. Therefore, for those whose means will permit, a quiet life, in a warm climate, at some mineral-water resort, offers the greatest advantage to successful treatment.

SALVISA, KY.

SYPHILIS.—The Société Dermatologie (*Progrès Médical*, February 8th,) has been considering the question of mercurial injections. The conclusions seem to be that their use should not be limited to severe cases, but that they are beneficial in all, and that injection is the best means of administering mercury, on account of its reliability, rapidity, and the intensity of its action. Le Pileur has treated six hundred cases with injections of gray oil, which he especially recommends. Hallopeau and others prefer injections of calomel.—*New York Medical Record*.

AMYLOID KIDNEY.*

BY R. C. M'CHORD, M. D.

Since 1827, when Dr. Richard Bright demonstrated by pathological investigation a disease of the kidneys, having as its most prominent symptom the presence of albumin in the urine, and the co-existence of dropsy, many pathologists have investigated this subject with the result that the symptoms above named are not, as formerly supposed, caused by one form of disease of the kidneys, but are dependent on various morbid conditions of these organs.

In opening the discussion on one of the phases of chronic Bright's disease, viz., amyloid kidney, it is not for me to discuss why this should be classified as a form of Bright's disease, or that it is known in medical literature as waxy, lardaceous, or depurative disease; but we have to deal with a degeneration that we know is always chronic, without an acute stage, and not in any sense local. It has its origin in changes which pervade the whole frame and produce tangible alterations wherever arteries penetrate. Usually it invades several organs of the body simultaneously, and the kidneys are not exempt from the general influence. This morbid deposit, or amyloid material, first makes its appearance in the walls of the minute arteries, and secondarily in the secreting tubes and cells of the kidneys.

When the arteries are principally involved there is a very little or no alteration in the appearance and size of the kidney, except it is slightly pale and its consistence firmer than normal. It is difficult at this stage of the disease to determine by ocular inspection any morbid changes; but by the aid of a solution of iodine, which has a wonderful affinity for coloring amyloid material, we are enabled to demonstrate its existence, the morbid material being colored a deep reddish brown, while the normal tissue is made yellow.

In a more advanced stage of the process the kidneys are increased in size, due to an extension of the deposit to the surrounding tissues, while in a still more advanced stage the organs are atrophied, their capsules adherent, their surfaces uneven, granular, and of a pale color.

The minute and essential changes revealed by the microscope are, briefly: First, an alteration in the walls of the blood vessels in the

arteries; second, an effusion through them into the tissues and cavities of the gland; thirdly, consequent changes both in the interstitial tissues and in the tubes.

The primary cause of amyloid degeneration is still a vexed question and a bone of contention. That it never occurs to those in perfect health, but is always an accompaniment of either chronic suppuration or syphilis, are points, I think, well settled by clinical observation.

Since Semmola outlined his theory of the secondary nature of many of the causes of Bright's disease in general and the development of modern bacteriology many have begun to seek the prime lesion influencing the establishment of renal inflammation, not especially in the kidneys but in diseases of the blood or other organs of the body, thus making it a simple phenomenon of depurative elimination.

That these noxious substances, constituted by various active agents or their products, which may be developed by tissue changes in the economy, may throw extra functions on and be injurious to the renal structures seems to be entirely tenable.

While chronic suppuration or syphilis is always an accompaniment of amyloid kidney, and, apart from suppuration and syphilis, neither poe disease, cancer, nor tubercles are capable of its production, may we not infer that there is something about either or both of the suppurative or syphilitic conditions which acts as a cause, and a most prolific one, in producing this amyloid condition? As to what this something is, no pathologist has as yet demonstrated a generally accepted theory.

Usually the early symptoms developed by amyloid degeneration of the kidneys are not well marked; but in the more advanced cases it is easier to recognize during life than any of the other forms of renal disease. The subject is under observation following a purulent discharge for syphilis; he notices that he is losing strength, both mentally and physically; has shortness of breath and dyspeptic symptoms; his countenance is pallid and careworn; the urine is much increased in quantity and of a low specific gravity, pale amber color, and contains a small quantity of albumin. Casts are not abundant. There is noticed an increased thirst and a necessity for frequent nocturnal micturition. Edema is slow and the ankles swell in the evening. General manifestations of dropsy are never met with to any great extent as they are in other renal affections.

The pale, waxy complexion is particularly marked in the syphilitic subjects, and is, with the enlarged spleen, liver, and kidneys, a diag-

nostic feature of much importance. The differential diagnosis between this and other forms of Bright's disease is not difficult. The history of the case as revealed by the subject being under surgical treatment either at the present or at some past time, for some of the many forms of suppurative disease, a copious flow of urine of low specific gravity, a small amount of albumin, and but a few casts, a syphilitic subject with enlarged liver and spleen; all or a few of these, coupled with the peculiar cachexia which is a marked feature of this disease, leave little ground for doubt as to its nature.

Amyloid disease of the kidneys, depending as it does on various morbid conditions of the system which would of necessity make the progress uncertain, and being always chronic, may exist for many years and the patient enjoy a fair degree of health if the cause producing it can be removed before the deposit (which is the essence of the disease) has taken place to any considerable extent.

When due to suppurative causes the deposits will continue to increase so long as the drain continues, but no longer; and whatever structures have escaped involvement are safe.

Should the cause not be removable the usual course is steady progression to a fatal termination, though much may be done to prolong life in these cases by careful and painstaking attention to details. I will not attempt in the time allotted to discuss the treatment in detail for that would involve to a great extent a rehearsal of what has been abundantly brought to your consideration in the other papers pertaining to this general subject, but I will confine myself more particularly to the surgical aspect of the treatment as the means of arresting the disease in its incipency, barring a syphilitic cause, is chiefly surgical.

When it occurs in a syphilitic subject, of course antisyphilitic remedies are indicated, but we should always remember that amyloid degeneration occurs only as a tertiary manifestation, and all measures which have a tendency to debilitate should be avoided, particularly the specific effects of mercury.

In considering the question of a surgical operation on a subject whose urine contains albumin, there are a few points of importance which should be well thought of and matured before it is undertaken: viz: That albuminuria increases the danger from the operation *per se*, and that there is additional danger from the anesthetic by its irritating effects on the already inflamed organ.

That persons suffering from albuminuria are exposed to greater dan

gers than commonly attend a surgical operation can not be denied; but these dangers are generally due to exposure of the patient and prolonged narcosis.

There is no reason why an operation which is necessary to remove a fatal cause, which can not be eradicated in any other way, may not be justifiable, provided the renal changes are not too far advanced, and the patient or family are advised of the additional risk. The choice of an anesthetic, though a mooted point, I would give to chloroform, and caution to use the minimum amount. Conservative surgery in an amyloid subject is not good surgery, and the question must often be reduced to a single alternative between life and limb.

Considering that the early stages of this disease are often without positive symptoms, it becomes necessary when there is a suspicion of amyloid disease, in any case where conservative surgery is contemplated, to look well to the physical and rational signs; and if, after mature consideration there is found a strong suspicion of a beginning amyloid disease, it would seem to be the part of wisdom to adopt that course of operative procedure which would most speedily and effectively stop the suppuration without regard to other considerations.

LEBANON, KY.

[This paper and the two which precede it are a part of the contribution to the "Special Discussion—Bright's Disease," provided by the programme of the Kentucky State Society for the afternoon session of the first day. The remaining papers, with the discussion which followed their reading, will appear in our next issue.—EDITORS AMERICAN PRACTITIONER AND NEWS.]

INTERNAL GLANDULAR SECRETION.*

J. M. DALTON, M. D.

There are three distinct classes of glands in the human body. First, those that excrete materials from the blood and convey them by mucous lined ducts to the surface, there to be used again or eliminated. The kidneys and the salivary glands belong to this class. The second class have a double function, one of which secretes materials from the blood and conveys them to the surface, as in the first class; the other extracts from the blood a certain substance and pours it back into the blood direct, or by means of the lymphatics—to this class belong the pancreas and liver. The third variety have no ducts, but elaborate an

* Read before the Central Kentucky Medical Association, Harrodsburg, Thursday, July 16, 1896.

internal secretion, which is poured back into the blood direct, or by lymphatics; this class is comprised of the spleen, thyroid, thymus, pituitary, and suprarenal glands. This function and function No. 2 of the second class is what I designate internal secretion. The advance of our knowledge of the physiological functions of these glands has been rapid in the past few years, and it is found that they play an important rôle in the animal economy.

It is believed, and I think proven beyond a doubt, that these glands secrete a ferment, which being poured back into the blood prevents a number of diseases that have heretofore been held as incurable.

I first call your attention to the function of the thyroid. It has long been known that wherever goitre prevails many of the children present peculiar impairment, both mental and physical; they are strangely malformed, completely idiotic or feeble-minded. This is the cretinoid state. This condition has been recognized as being connected in some way with disease or atrophy of the thyroid. This disease is endemic, but sporadic cases occur, and cases have frequently been met with in this country.

Sir William Gull and Dr. Ord showed that in adults a remarkable mental and physical change supervened in certain forms of disease of the thyroid gland. The subjects showed great impairment of the brain function, often leading to dementia, great thickening of the subcutaneous tissue, marked change in the nutrition of the skin. So similar was this condition to the cretinoid state that Ord called it myxedema, owing to the large amount of mucoid material in the subcutaneous tissue.

Kocher and Reverdin discovered that total extirpation of the thyroid, as practiced in goitre, was followed by a condition identical to that of myxedema. Shiff and Horsely showed that these changes invariably followed total extirpation of the thyroid. If, on the other hand, a supernumerary gland existed, the change did not occur, or even if a small fragment of the gland was left, or if a portion of the thyroid was transplanted to another part of the body, the change did not occur. Dr. Murray demonstrated that the peculiar symptoms following thyroidectomy in an animal did not occur if a gland from another animal be transplanted. Sometimes the grafted gland did not grow

deduction from which has proved the most striking therapeutical discovery of modern times. Murray very naturally grasped the idea of furnishing the thyroid from other animals to myxedema subjects. At first grafting was practiced, then it was found that feeding by the mouth was as good, or the subcutaneous injection of the extract of the thyroid proved equally effective.

This opened one of the most interesting chapters in the history of therapeutics. The extract is prepared from the thyroid of a sheep; a hog or cow would do as well, only the sheep is thought to be more healthy. The gland is removed under aseptic precautions, the gland tissue carefully dissected from the other tissues, then macerated and placed in a mixture of equal parts of glycerine and distilled water. The gland from one animal will make about two drams of the extract. From ten to twenty drops of this is injected once a day.

To illustrate the treatment by thyroid feeding in myxedema and cretinism, which has proven itself without parallel in practical medicine, I can do best by giving you a history of a case of Dr. Osler, of Baltimore, who has kindly furnished it to me. I give it in his language: "A lady came under my care who for six years had been changing gradually, both mentally and physically. She had become heavy, bloated, and flabby, and the skin exceedingly dry, the face puffy, eyelids baggy, and there were cushions of swollen, subcutaneous tissue about the neck. The hair was dry, and there was a condition of patchy alopecia. She had changed mentally from a bright, active, intelligent woman, capable of taking charge of a large household, to a dull, listless, apathetic creature whose only wish was to be let alone. In short she was an advanced case of myxedema, scarcely able to walk, and presenting in many respects a pitiful caricature of the human form and face. Within three months under the use of the thyroid extract she had lost all her bloated appearance, physically she had become active and energetic, and mentally she took an interest in every thing. She returned home, resumed her domestic duties, and though it has been three years she is to-day free from swelling, the skin is moist, the hair has grown again, and the woman leads an active life, practically rescued from a condition of hopeless fatuity."

This is not an isolated case, but they number by the score, both in adult and early infantile myxedema—a brilliant triumph for experimental medicine! You will observe that I make no difference between cretinism and myxedema, the only difference is the age when the disease begins.

When the trouble is congenital or begins in childhood before the age of fifteen it is called cretinism. When it begins after fifteen or from removal of thyroid gland at any age it is designated myxedema. Both are caused by the failure of the thyroid to furnish the ferment necessary to maintain the healthy metabolism. Atrophy or any disease of the gland that diminishes or destroys the function will cause this condition. The opposite, that of increased secretion, causes goitre. These clinical and experimental facts have opened wide the door of investigation to the ductless glands, all of which bear a close relation to each other, and all play an important part in the function of life.

I now invite your attention to the suprarenal glands. In 1855 Addison described a disease of the suprarenal glands and demonstrated that these little bodies are not without influence in health. He recognized three important symptoms, namely, gradual deepening of the pigmentation of the skin, profound asthenia, both muscular and mental, and gastro-intestinal disturbance. It has been found that in the majority of cases the disease of the glands is tuberculous, but we have the symptoms following cancer, atrophy, and sclerosis.

Recently Shaefer and Oliver have found that an extract prepared from the medullary portion of the adrenal gland contains an organic principle of extraordinary power, which acts especially upon the muscular fibers of the heart and peripheral arteries, also on the voluntary muscles. They were not able to obtain this substance from the glands of two subjects having Addison's disease. This gave them strong evidence in favor of the view that the adrenals are functional glands which contribute a most important internal secretion, the nature of which is not yet understood, but has an important influence upon the healthy metabolism of the skin and muscles.

Now comes the all important therapeutical test, that of preparing an extract from the adrenal glands of a sheep, in the same manner as that of the thyroid for myxedema, and administering it to patients; and the results have been brilliant successes. This disease is so rare that comparatively few cases have been treated by adrenal feeding, but enough has been shown to establish beyond question that when the disease is from sclerosis and atrophy, and even in the early stages of tuberculous disease, the patients are practically restored to health. Of course when the disease is a part of advanced general tuberculosis or cancer the treatment will avail but little. It is clear that the absence of the healthy secretion of the adrenal causes Addison's disease, but we do not yet know what disease, if any, oversecretion of these glands will cause.

We now pass to the consideration of the pancreas. You will remember that this gland has a double function, that of secreting pancreatic juice, which is conducted to the intestinal surface to be used in digestion, the other of secreting a glycolitic ferment and pouring it back into the blood direct, as I hope to show you by my quotations from a number of painstaking clinicians who have been and are now conducting the most exhaustive investigations in this line.

In 1877 Prof. Lancereaux demonstrated before the Paris Academy of Medicine that there was a striking relation between true diabetes and disease of the pancreas by exhibiting specimens of pancreas taken from diabetic patients. He claimed that in a majority of cases of true diabetes mellitus a *post-mortem* would reveal degenerative changes, sclerosis, cyst, and atrophy of the pancreas. Later Lapierre verified this statement. Von Mehring extirpated the pancreas in dogs, and found in every case sugar appeared in the urine as soon as the pancreas was removed, and remained so as long as the animals lived. Hedon excised the pancreas in twenty-two dogs, and in each case diabetic urine was passed the next day and persisted until the death of the animal, and in addition to the sugar great thirst, hunger, and emaciation supervened.

Lepine believes that the blood has power of constantly destroying glucose by the action of a ferment made in the pancreas. This ferment is diminished in diseases of the pancreas and wanting when the gland is destroyed. Minkowsky by experiment proved that if a portion of the gland removed be transplanted beneath the peritoneum, the diabetic condition was averted. Torup demonstrated by experiment that, after extirpation of the pancreas and the animal became diabetic, by the subcutaneous injection of extract made from the pancreas the sugar was destroyed in the blood and remained so as long as the injections were continued.

I here rest my case, believing that it has been proven that true diabetes mellitus is due to degenerative lesions of the pancreas, which impair and destroy its function of pouring into the blood, a glycolitic ferment, the presence of which in the blood determines the destruction of sugar.

Reviewing the grounds, it is clear that the natural and rational remedy is to supply this glycolitic ferment. In this the same steps have been carried out as were in thyroid extract in myxedema. Battistini has recently announced a series of cases treated by subcutaneous injection of pancreatic extract with almost as brilliant results as has

been attained in thyroid feeding in myxedema. Torup reports a number of cases treated by the extract with marked improvement in all the cases, and where the disease was taken early a restoration to health occurred. This author believes that it has been fully established that sugar is destroyed in the blood of diabetic animals by pancreatic extract from the glands of other animals.

If time permitted, I could quote a number of authors whose experiments prove the same as has been stated, but I take it that enough has been said to get the subject clearly before your minds and to prove, first, that true diabetes is caused by some disease of the pancreas, which diminishes or destroys its function of elaborating a certain ferment which being poured back into the blood destroys glucose; second, that the extract made from the pancreas of another animal will restore the subject to health.

I take the liberty here to state that I recognize the other forms of diabetes mellitus, such as the hepatic, dialytic, and the cerebral forms, but have purposely avoided discussing them at this time. The most exhaustive and painstaking practical tests are now being carried out in the treatment of true diabetes mellitus by the pancreatic extract by Torup, Valli, Battistini, Thierloix, and Minkowsky on the continent, and Osler, Whittaker, Jones, and Marvin of this country. These men already announce that it is established that sugar in the blood of diabetic animals is destroyed by artificial glycolytic ferment, all else in comparison is of secondary importance. Cases of cretinism, myxedema, and Addison's disease are met with so seldom in this country that to us practically the subject would not be so interesting except for the investigation it has aroused in other diseases. But we meet diabetes mellitus every day, therefore the subject is of the most vital importance.

When we consider that diabetes has been so fatal and that the treatment recommended heretofore has proved of no avail, should we not hail with delight a remedy that promises so much as the pancreatic extract.

The most sanguine believer in the efficiency of medical treatment would, a few years ago, have been incredulous had he been informed that diabetes was curable by administering an extract from the pancreas; but curable it certainly is, as practical results have already shown. Unlike the serums, this extract can be easily made by the physician which enables him at any time to get a good extract.

My subject covers the function and disease of other glands that d

internal secretion, namely, the pituitary, bronchial, spleen, etc., but I have already taken up the time allotted me for this report.

In conclusion, I desire to express a hope that this line of investigation that has done so much in the above-named diseases may go on, and soon we shall know the causes of a number of diseases that heretofore have been unknown and have been held by the profession as incurable.

HARRODSBURG, KY.

Abstracts and Selections.

SHORT NOTES OF TWO CASES OF OPIUM POISONING.—The following two cases of opium poisoning seem to possess features of sufficient interest to warrant the presenting short notes of them to the Medico-Chirurgical Society:

1. About 6:30 on the morning of the 12th of April, 1895, I was hurriedly summoned to a case, said to be one of poisoning. I took with me a syphon apparatus for washing out the stomach, and on arriving at the house was informed that the patient had dined heartily the previous evening about seven o'clock, that some hours later he had experienced severe pain over the heart, for which he had taken a dose of laudanum, and the friends were afraid that he had taken an overdose. The patient, a gentleman about forty years of age, was in bed, pale, breathing slowly, pin-point pupils; he could be roused with difficulty, answered in monosyllables, and if left alone relapsed at once into somnolence. I at once injected subcutaneously about $\frac{1}{8}$ grain of atropine sulphate, got him out of bed, and with some trouble kept him awake in a chair until the esophageal tube was passed and the stomach was washed out. A large quantity of partially digested food was removed with some difficulty, because of the occasional blocking of the tube. The material smelt strongly of opium, and it contained a large amount of mucus. The stomach was washed out till the water returned almost clear, then strong coffee was given, and assistants were obtained to keep the patient walking about. As the pupils were still small, a second subcutaneous injection of atropine was given, on this occasion $\frac{1}{16}$ grain. In the forenoon the patient was still drowsy, and craved to be allowed to sleep. As the day advanced he was permitted to rest at intervals. In the evening he was out of danger, and allowed to go to bed. It was found that the dose of laudanum taken was two ounces. Although he had occasionally taken small doses for sleeplessness, he was not in the habit of using opiates. The chief point of interest in this case is that although a large dose of fluid preparation of opium was taken at night, it was found that six or seven

hours afterward the stomach still contained a large quantity, and therefore the symptoms of opium poisoning were not so profound as might have been expected in view of the long time which had elapsed after the taking of such a dose. The explanation is, doubtless, (1) That the dose had been taken when the stomach was full of food; (2) that in consequence of well marked gastric catarrh the dinner was only partially digested, and for the same reason only a small portion of the laudanum had been absorbed. This is a demonstration on a somewhat large scale of facts with which we are conversant in practice, viz., that for the immediate relief of severe pain in a patient who has much in his stomach, or in one who is the subject of severe gastric catarrh, it is of little avail to give morphine by the mouth. In such cases it should be given hypodermically.

2. On July 24, 1895, I was called between one and two o'clock A. M. to see a somewhat small man, who had taken, not very long previously, about an ounce and a half of laudanum. He presented the ordinary symptoms of opium poisoning. The pupils were very small. He could be roused without much difficulty, but could not be made to give any account of his previous proceedings, and when left alone he at once fell asleep. Having shortly before that time read in the *British Medical Journal* a paper by Dr. Moor, of New York, on "Permanganate of Potash as an Antidote in Opium Poisoning," I gave, in a large cupful of water, about an ounce of Condyl's fluid, which was fortunately at hand in the patient's house, then went to get my syphon apparatus. Immediately after returning the patient's stomach was washed out until water with a small quantity of Condyl's fluid added to it returned unchanged in color. A little Condyl in water was then given to drink, and the patient was kept moving. He remained drowsy until the forenoon. This case seems to afford a good example of the power of potassium permanganate to render innocuous preparations containing morphine.

Dr. Moor (*British Medical Journal*, June 1895, p. 1369), after having experimented with morphine preparations, convinced himself that the morphine is oxidized, and that the manganese salt is reduced to hydrated manganese dioxide. He found that sulphate of morphine is decomposed much more rapidly than albuminous matter, such as white of egg—that one grain of permanganate oxidizes one grain of morphine. Such confidence had he in the power of this remedy that, although he is very susceptible to the action of narcotics, he took on one occasion three grains of sulphate of morphine, followed in thirty seconds by four grains of potassium permanganate; and on another occasion, two hours after breakfast, he took five grains of sulphate of morphine, followed in a few seconds by eight grains of the antidote dissolved in eight ounces of water, and in neither case did he experience any effect from the narcotic. Recently in the *British Medical Journal* (May 16, 1896, p. 1193), Dr. Luff, of St. Mary's Hospital, records a series of experiments in which he mixed a known quantity of morphine acetate with vomit, and after thorough agitation a known quantity of potassium permanganate in solution was added. After a time careful examination

was made, but not the faintest trace of morphine could be discovered. These experiments demonstrated that this salt of morphine is more readily oxidized than other stomach contents. Dr. Luff advises that if laudanum has been taken and the quantity is known, six grains of permanganate should be given for every ounce of laudanum, that the stomach should be washed out, and, as morphine is partly excreted into the stomach, it should be washed out two or three times at intervals of half an hour. As the antidote seems to be so certain in its action, such an unpleasant proceeding is surely unnecessary. Is it not sufficient after the first washing to give small doses to be swallowed?—*Dr. James Ritchie; Edinburgh Medical Journal.*

SANITARIUM TREATMENT OF PHTHISIS.—Dr. Otis (New York Medical Journal, June 3, 1896,) writes as follows: "It seems to me that it is to be deplored that the main object of all sanitarium treatment—namely, the hygienic—should in any way be obscured in these laudable attempts to establish special institutions for the treatment of consumption by the more specious claims of special methods of treatment or specifics. It is well to again repeat that up to the present time there has been discovered no specific which will cure consumption, and the best results have been and are now obtained by the hygienic, open-air treatment, as illustrated in the best equipped and best conducted sanitariums. The extraordinary and unexpected, like the 'X' rays, may at any time happen in the discovery of the devoutly desired specific or immunizing serum; but when it does come, if ever, there will still be as great a need of sanitariums as at present, where the damage left in the wake of the dislodged and routed bacillus and his confrères can be repaired, and the battered body gently and skillfully restored for further service."

CASE OF FATAL INFANTILE JAUNDICE FROM CONGENITAL NARROWING OF THE COMMON BILE-DUCT.—In a recent volume of the Society's Transactions there appears an elaborate paper on Congenital Obliteration of the Bile-ducts, by Dr. John Thomson.

In this paper he has collected all the published cases, dividing them into two groups, the first including the larger number, where the passage of bile into the duodenum was impossible owing to obliteration of some part of the bile-ducts; the second group including a smaller number of cases where the bile-ducts, although permeable, were not sufficiently so as to permit of the passage of bile during life.

The following are the notes of a case coming under this latter group, of interest from the condition of the common bile-duct causing obstruction to the passage of the bile.

Matilda Chisholm, aged three months and four days, was brought to the

most marked on the chest and abdomen, but five weeks after birth the conjunctivæ were noticed to be also affected.

The father, a millworker, has always enjoyed good health, and denies having had any form of venereal disease.

The mother, who has had two children, appears to be healthy, has had no miscarriages, and except for a sore throat during her first pregnancy, at the fourth month, her health has always been good.

The other child, a boy fourteen months old, is perfectly healthy, has had no symptoms suggestive of congenital syphilis; had jaundice for two or three days after birth.

During her second pregnancy the mother enjoyed good health; the child was born at full time, and her labor was uncomplicated. At birth the child was considered small, and from the first day the skin was noted to be very yellow. There was never any hemorrhage from the umbilicus nor from the bowels, mouth, or nose. It was bottle-fed, and had occasional attacks of vomiting. There never were symptoms suggestive of congenital syphilis.

When seen for the first time it was noted to be very emaciated, and the skin had a yellow-green color, the conjunctivæ being likewise affected.

There was considerable distension of the abdomen, especially marked over the right side. On palpation the liver was felt to be enlarged, its lower edge sharp, and on percussion in the mammillary line the dullness extended from the fifth rib to midway between the costal margin and umbilicus. The spleen was not felt below the costal margins some days later when the attempt was made for the first time. Examination of thorax was negative. Gray powders, one half grain twice daily, were prescribed (so as to keep it attending the Infirmary). It was seen twice a week during the three weeks it attended the Infirmary. There was never any improvement noted; the skin always appeared to become greener in appearance, although the mother stated that the intenseness of the jaundice varied. The emaciation was progressive, and during the last week of attendance there was noted marked redness and swelling of both eyelids, especially the left, with greenish-yellow discharge and a filmy appearance of both corneas, which became slightly opaque two days later.

The stools from the day of birth were white and milky, and on several occasions I was able to satisfy myself of this putty-like color. The urine was dark, and stained the linen yellow. On examination it contained biliverdin pigment; no albumin. Microscopic examination not made.

A post-mortem was made, and the abdominal organs removed. The thorax was not examined. The skin was noted to be of a greenish tinge, the body very emaciated. On opening the abdomen the peritoneum appeared perfectly normal; there were no adhesions and no ascites.

Liver enlarged, 237 grams (= 8 oz.) Length of upper surface, $6\frac{1}{2}$ in.; length of lower surface, $5\frac{3}{4}$ in. Antero-posterior—Right lobe, $4\frac{1}{4}$ in.; left lobe, $3\frac{1}{4}$ in. Its edges are sharp, color olive green, consistence tough. Fibrous bands of a yellow color are seen on surface, which is somewhat

irregular. Gall-bladder flaccid, and contains thin bile; capsule not thickened, and on squeezing a cut surface brownish fluid exudes. Both hepatic ducts appear normal, likewise the cystic duct. The common duct immediately below the junction of the cystic and hepatic ducts appears to be of normal caliber, but from this point it gradually becomes narrower, having a thread-like appearance in the lower part of its course. It ends in a well-marked papilla on which no orifice could at first be seen with the aid of a lens, but on pressing the gall-bladder bile passes easily into the upper part of the duct, the passage from this point downward into the duodenum being slower.

Spleen measures $2\frac{3}{4}$ in. longest diameter; $1\frac{3}{4}$ in. transverse diameter; weight, $\frac{3}{4}$ oz. Kidneys appear normal, 14 grams. Intestines normal, and contain cream-colored mucus; no blood corpuscles. Microscopically, several sections examined appear perfectly normal, in others there is slight biliary cirrhosis.

With regard to the health of the parents, syphilis can, I think, be excluded. The sore throat referred to appeared, on questioning the mother, to have been of the nature of an ordinary catarrh, and there were no other symptoms pointing to syphilis.

The other child appeared healthy, and the jaundice it is reported to have had was most probably the ordinary form of jaundice neonatorum.

The duration of life ($3\frac{1}{2}$ months) is longer in this than in the other published cases, which may be accounted for by the complete absence of hemorrhages.

The case further shows, as Dr. Thomson has pointed out, the close resemblance between those cases with pervious ducts and those where the obliteration is complete.—*Dr. J. A. C. Kynoch, in Edinburgh Medical Journal.*

SUGAR AS A MEANS OF INCREASING UTERINE CONTRACTIONS.—Some time ago Bossi brought the ecbolic action of sugar before the notice of the profession (*vide* Periscope in *Edinburgh Medical Journal*, March 1894), and now Dr. Kosminski gives an account of his experiences with this agent. He gave from 300 to 800 grams of sugar daily to pregnant women; from 100 to 200 grams to women in the first stage of labor; and from 100 to 225 grams to patients in the expulsive stage. His conclusions are: (1) Sugar given in large doses to pregnant women at term increases existing uterine contractions, and may even provoke labor; at the same time it causes vomiting and diarrhea, lasting two days or so; and glycosuria, persisting for three or four days. (2) When given in rather large doses at the time of full term or premature confinement it increases the pains of both the first and second stages of labor, and seems also to have a favorable influence on the uterine retraction following delivery; if moderate doses are used glycosuria rarely supervenes, and when it does occur passes off quickly, without hurting either mother or infant. (3) The increase in the pains of labor following the taking of the sugar is not always exactly proportionate to the dose em-

ployed, pointing to an uncertainty in the action of the agent upon the muscular fibers of the uterus. (4) Large doses of sugar must be avoided in pregnant and parturient women, for it causes a rather intractable glycosuria. (5) Its employment has no very great practical importance; but it may be used to increase the expulsive efforts in the second stage of labor, or it may be given after delivery to encourage uterine retraction.—*Przegląd lekarski* in *Edinburgh Medical Journal*.

CRYPTOGENETIC SEPSIS.—Dr. James T. Whittaker, of Cincinnati, Ohio, says that the terms pyemia, septicemia, sepsis, septic-pyemia, are variously employed by different authors. There is no longer support for the different terms. Pyemia was the term first employed. It was a useful term because it expressed a poisoning of the blood by pus and connected this poisoning with a pus center. So distinct was this connection that the people understood it by the common term "blood-poisoning." But the mere presence of pus in the blood does not necessarily produce blood poisoning. In one sense there is always pus in the blood; that is, there are white blood corpuscles, leucocytes, and these corpuscles accumulate in leucocytes to constitute a protective process. Pyemia is now generally understood to mean infection of the blood as indicated by multiple metastases, in the absence of any central depot of suppuration; whereas, septicemia is used to express the infection of the blood in which there is a decided depot in the absence of demonstrable metastases. It is believed at the present day that rheumatism is caused by micro-organisms closely allied to if not identical with the micro-organisms of pus.

Dr. Whittaker made the point that many of the lighter forms of disease which had been vaguely described as rheumatism, malaria, incipient tuberculosis, la grippe, or a bad cold were cases of light infection with septic matter in which the micro-organisms of sepsis may be found in the blood and that individuals who are frequent subjects of these diseases are carrying about in them manifest or more especially concealed depots or colonies of septic micro-organisms.

The treatment may be dismissed in a few words. The prophylaxis depends upon an increase in the general habits of cleanliness, the greater frequency of ablutions, and more care for higher sanitation.

GONORRHEA.—Dr. Schwimmer used alumnol in injections, irrigation and instillations (0.5 to 5 per cent.). Its effect in chronic cases seemed to be better than in acute cases. In women tampons soaked in the solution are used more or less successfully.—*Arch. f. Dermat; New York Medical Record*.

QUININE is distinctly contra-indicated in inflammation of the middle ear of the skin, meninges, and the urinary and alimentary tracts.—*Ibid*.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNĀ."

Vol. 22.

SATURDAY, AUGUST 8, 1896.

No. 3.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

Subscriptions and advertisements received, specimen copies and bound volumes for sale by the undersigned, to whom remittances may be sent by postal money order, bank check, or registered letter. Address

JOHN P. MORTON & COMPANY, Louisville, Ky.

HYGIENE IN LOUISVILLE.

Elsewhere in this issue we publish the mortality report of Health Officer White for the city of Louisville during the month of July, 1896.

The total number of deaths is 356, which would give for the year a rate of about 21 per thousand. This is four more than the average as fixed by the late Dr. Parkes, and exceeds by one and one half the highest average death-rate *per milli* noted in London for the decennium, 1881-90. It may be argued that July is not an average month, for notwithstanding the fact that it is the season of flight to the country and to the health resorts by the well-to-do, the increased mortality from bowel derangements among the children of the poor who stay at home generally causes it to take high rank upon the mortuary list. But be it as it may, the figures are not unfavorable to Louisville as a city fit for residence, nor are they any discredit to our able and energetic health officer, Dr. W. P. White, who is doing every thing in his power to make Louisville the healthiest city on the continent. These figures, however, can not be passed over with the euphemisms of friendship and good feeling; for the list holds the damaging figure seventeen against typhoid fever, which, being a preventable disease, is a stern arraignment of our sanitary arrangements in the matters of water and milk supply.

The milk supply has been put under surveillance, and to-day is much less a menace than in former years; but the water supply is still beneath criticism and seems likely to so remain indefinitely.

Our wells which are the chief supply of the poor stand condemned in the light of sanitary science by their equal depth with and proximity to our privies, which to the disgrace of our city still ornament many backyards and damage the health of our inhabitants.

But while the well nuisance is slowly undergoing abatement, and will in a few years probably disappear, what shall be said of our boasted river water supply? It is useless for interested writers to wax eloquent (as has heretofore been their wont) upon this inspiring theme. The Ohio River not only is not an ideal source for the water supply of a great city; but is and must be, by the very nature of its environment, a sluice of filth and a menace to health.

We may flatter ourselves that our water-works are a hundred and fifty miles down current from Cincinnati, and safely up-stream from classic Beargrass; but none but the willfully blind can fail to see that the river is a sewer for all the cities and villages upon its banks and the banks of its tributaries over lines measuring hundreds of miles, while Goose Creek which carries in suspension and in solution the excrementitious matter of health and disease of the inmates of the State Lunatic Asylum at Lakeland disembogues into the river at a point up-stream dangerously near to our water take.

These facts taken together with the too evident fact that the water is turbid with mud and other foreign matter, and the easily demonstrable fact that it contains chlorides and albuminoid ammonia above the safety limit, and swarms with bacteria innumerable and of great variety, would render it impossible for a conscientious stranger to drink it to his own and our health.

To the credit of the health officer and the managers of our water-works a series of expensive experiments are now being made with a view to filtering the water. The experiments, if we are correctly informed, have up to date been successful, and it is to be hoped that the Water Company will soon be able to furnish the city with potable water of a high degree of purity.

Pending this, the duty of the doctor, who is the only sanitary mis-

while many good filters can be supplied at prices within reach of those of small means. The poor can boil the water if they will.

If proper attention were paid to the purification of our waters and the milk and butter supply of our city were placed above sanitary criticism, typhoid fever would cease to scourge our people.

Notes and Queries.

MORTALITY FOR THE MONTH ENDING JULY 31, 1896.

Cause of Death.	No.	Cause of Death.	No.
Abscess of Brain,	2	Hydrocephalus,	2
" all others,	1	Inanition,	30
Anemia,	2	Jaundice,	1
Aneurism,	2	Kidney, Bright's Disease of,	5
Apoplexy,	7	Laryngitis,	1
Ascites,	2	Liver, Cirrhosis of,	7
Asthma,	1	Locomotor Ataxia,	1
Atelectasis Pulmonum,	1	Marasmus,	1
Bowels, Obstruction of,	1	Measles,	2
Brain, Congestion of,	10	Meningitis, Cerebral,	12
Bronchitis,	6	Nephritis,	5
Cancer of Liver,	1	Neurasthenia,	2
" Womb,	2	Old Age,	10
" Stomach,	2	Paralysis,	5
" all others,	8	Peritonitis,	6
Cholera Infantum,	17	Pertussis,	1
Cholera Morbus,	2	Pneumonia,	13
Consumption,	39	Pott's Disease,	1
Convulsions,	15	Pyemia,	1
Cyanosis,	1	Sarcoma,	1
Cystitis,	1	Septicemia,	4
Diarrhea, Acute,	1	Shock,	1
Diabetes,	1	Sunstroke,	1
Diphtheria,	1	Syphilis,	1
Dysentery, Acute	5	Tabes Mesenterica,	1
Dropsy,	3	Tetanus,	1
Debility, General,	3	Trismus Nascentium,	1
Enteritis,	2	Tumor,	1
Entero-colitis,	7	Ulceration of Bowels,	1
Epilepsy,	1	" Stomach,	1
Endocarditis,	1	Uremia,	2
Empyema,	1	Unknown,	2
Fracture Skull,	1	Congestive Chill,	3
Fever, Puerperal,	2	Accident, Drowning,	8
" Remittent,	2	" Burns and Scalds,	4
" Typhoid,	17	" Railroad,	4
Gangrene,	2	" all others,	1
Gastritis,	3	Homicide,	1
Gastro-Enteritis,	1	Suicide,	1
Heart, Organic Disease of,	16		
Hemorrhage of Lungs,	1	Total,	356

A SECRET REMEDY AT BELLEVUE HOSPITAL.—Considerable commotion has been caused of late by the setting apart, by order of the Commissioner of Public Charities, in spite of the medical board of the hospital, of one of the alcoholic wards of Bellevue Hospital for the use of a certain physician of New York, but not connected with the institution, who is to treat patients by means of a recent remedy, which he claims to have discovered. This physician is Dr. Isaac Oppenheimer, and the curious part of the matter is that up to the present time he has been a regular practitioner in good standing, being a graduate of the College of Physicians and Surgeons (in the year 1876), a Fellow of the Academy of Medicine, and a member of the Medical Society of the County of New York. In the only case that has thus far been made public of which Dr. Oppenheimer had charge, the patient, who had been transferred to Bellevue from the Harlem Hospital, died a few hours after his admission to the ward. In this case, however, the doctor claims that the man was suffering from an advanced stage of Bright's Disease, and that he made no attempt to treat him with his new "cure."—*Boston Medical and Surgical Journal*.

A LARGE CONTINGENT FEE.—The following curious notice has recently appeared in the newspapers:

ONE MILLION DOLLARS REWARD.—To Physicians, Surgeons, Scientists, Wise Men, and all others whom it may concern: Be it known that I, Charles Broadway Rouse, who possess considerable wealth, hereby agree to pay the sum of one million dollars to any human being who restores to me my sight.

Mr. Rouse is an eccentric New York merchant who is suffering from atrophy of the optic nerve. Some time ago he discovered that one of his former employes, a man by the name of Martin, was affected in the same way as himself. He took a great interest in his case and was very kind in securing the best medical treatment for him and otherwise providing for his welfare and comfort. Out of gratitude for this kindness he has offered to subject himself to any kind of treatment that is thought worthy of trial, and any one who believes that he has a chance of winning the million-dollar reward must first test the efficacy of his treatment on Martin.—*Ibid*.

WONDERFUL CURES EXPLAINED.—A few years ago, says the London Lancet, when diphtheria was raging in England, a gentleman accompanied the celebrated Dr. Field on his rounds to witness the so-called "wonderful cures" which he performed, while the patients of others were dropping on all sides. All he took with him was powder of sulphur and a quill, and with these he cured every patient without exception—that is, he put a teaspoonful of flour of brimstone into a wineglass of water, and stirred it with his finger instead of a spoon, as sulphur does not readily amalgamate with water, and, on the sulphur becoming well mixed, he gave it as a gargle, and in ten minutes the patient was out of danger, as brimstone kills every species of fungus in man, beast, and plant in a few minutes. Instead of spi-

ting out the gargle, he recommended the swallowing of it, and in extreme cases, in which he had been called just in the nick of time, when the fungus was too nearly closing to allow the gargling, he blew the sulphur through a quill into the throat, and after the fungus had shrunk to allow of it, then the gargling. He never lost a patient from diphtheria. Or, if the patient can not gargle, take a live coal, put it on a shovel, and sprinkle a spoonful or two of the brimstone at a time upon it, let the sufferer inhale it, holding the head over it, and the fungus will die.—*Exchange*.

THYROID EXTRACT.—Dr. James B. Herrick, of Chicago, in a paper (Ills. State Med. Society) entitled "Therapeutic Uses of the Thyroid Extract," reviewed at considerable length thyroid therapy and presented the conclusions that one feels justified in drawing from a study of the results already accomplished by the employment of this remedial agent in various diseases. He drew the following deductions concerning thyroid extract:

1. It is curative in myxedema (idiopathic cretinism, operative).
2. Many cases of obesity are cured by it.
3. Simple hyperplastic struma, particularly in the young, is frequently cured or improved.
4. In 1, 2, or 3, the remedy has to be continued for an indefinite time in order to prevent relapse.
5. It may prove of value in some cases of tetany.
6. In skin diseases it is of doubtful value, to say the least.
7. The same is true of mental and nervous diseases.
8. In exophthalmic goitre it is contra-indicated.
9. The results are practically the same whether fresh glands, extracts, or dried glands are employed.

This is probably true also of the thyroïdin of Baumann.

PRECOCIOUS MOTHERS.—In the February number of this journal there appeared a note of a girl who was delivered of a healthy child at the age of ten years and two months. In the Atlanta Medical and Surgical Journal, of April, 1896, Dr. T. J. Mitchell, of Locust Grove, Ga., has an almost equally young mother; one who at the age of thirteen years was already the mother of three children! She first became a mother at the early age of eleven years, three months, and twenty-three days, and gave birth to twins at the age of thirteen years, one month, and fifteen days.—*American Journal of Surgery and Gynecology*.

A VALUABLE INVENTION.—The London Lancet says: Litmus is an admirable indicator of acids and alkalies, but for this purpose can only be relied upon when pure. Its preparation in a pure state is not easy, and involves a series of operations which takes an inconveniently long time. The litmus pencil provides us at once with the pure coloring material in a

very convenient form for use. Thus by merely tracing a piece of paper with the pencil, a mark is obtained which we find is extremely sensitive to minute quantities of acids and alkalies, according, of course, as to whether the blue or red end of the pencil is used. For the practitioner in testing, for example, the reaction of urine, it will be invaluable, because reliable and the indication it gives is distinct. The pencil is the invention of J. Tyree, a chemist of Washington, D. C.

DIPHTHERIA ANTITOXIC SERUM.—It is most essential that provision should be made for having the samples of serum in the market tested periodically and standardized. There should be some uniform method of testing employed, and that of Ehrlich and Behring seems to be the most reliable; and it should be done by an independent central authority. The German Government, which in all these matters is so far ahead of that of any other country, has already established such a central authority. Therefore, too, it may be advisable to limit the sources of supply. We do not advocate a monopoly even in antitoxin, but having regard to the nature of the remedy, to the liability of an organic fluid to become contaminated, and to the importance of each sample of serum being up to a standard minimum antitoxic potency (our commissioners suggest that this should be not less than sixty normal units per c. c.), it is obvious that the more limited the sources of supply the less the liability to defects. Especially would we urge the rejection of any samples that show evidence of contamination. Every thing goes to show that the "antitoxin" itself is free from any effect on the body, no matter in what amount it is administered. Its beneficial action is to protect from the virulence of the toxin; but the serum that contains it may harbor less benign elements, and it is quite conceivable that many of the "Nebenwirkungen"—that is, accidental rather than essential qualities—of the serum are due to adulteration and not to remedial principle.—*Lancet*.

THEIR VOCATION MISTAKEN.—A heavily veiled woman recently asked for a private interview with the janitor of the Baltimore College of Physicians and Surgeons, in which she solicited the assistance of that institution. She stated that a man who had done her a wrong for which she wanted to be avenged was now an invalid and in her power; and she wished a physician sent who would quickly dispatch him, after which the college could have him rapidly dissected, thus avoiding the possibility of detection. She had understood that such acts were often performed by medical colleges, and for this favor she would pay handsomely.—*Medical News*.

A CODE OF MEDICAL ETHICS.—To the graduating class in the medical department of the University of Pennsylvania, Dr. H. C. Wood said: "Consider every member of the profession as one of your own family, and having an inherent right to your medical services, but do not abuse this right; con-

sider any discovery or invention you may make as belonging to the general profession; never in any way laud your own medical skill or attempt to supplant in public or private estimation one of your medical brethren; join as soon as may be the incorporated companies of your fellows for scientific and social intercourse, and for the cultivation of that professional conscience which often binds men more closely than their personal sense of right and wrong; through good and ill report stand by members of your own profession, unless they be guilty of moral evil."—*Medical Age*.

A SUCCESSFUL LAPAROTOMY AT EIGHTY-ONE YEARS.—Dr. J. F. Binnie reports a case of gall-bladder disease associated with great pain, in a lady patient eighty-one years old. This is probably a greater age than any other recorded case of this disease. The patient desired relief through operation, and the doctor very skillfully performed a cholecystotomy and fastened the edges of the gall-bladder to the external wound. The patient recovered nicely, but being annoyed by the discharge of bile from this opening she requested a second operation, which was performed last week, and consisted in establishing an anastomosis between the gall-bladder and the intestine. At the present writing this second operation promises to be a marked success. Can any one send us the record of a successful operation of the kind at a more advanced age?

THE NECESSITY OF MICRO-ORGANISMS IN DIGESTION.—A great many items have been printed in recent numbers of the medical press the drift of which has been that bacteria were essential to digestion. The facts are these:

1. Most bacteria (the intestine and the mouth, often the stomach, swarms with them) are harmless to digestion.
2. They form compounds, by their action upon foods, that may be even advantageous.
3. Normal digestion is better performed without them.
4. Under certain condition, not now well known, they may become pathogenic and cause disease.
5. The statement that they are necessary to the normal process of digestion has been disproved. Don't believe it.—*Kansas City Medical Index*.

BALTIMORE INSPECTS ITS BAKERIES.—The Board of Health of Baltimore has appointed an inspector of bakeries, whose duty will be to make periodical visits to such places, and inspect material, utensils, and everything pertaining to the operation of baking. The aim of the department is a worthy one, and conducted upon lines sufficiently wide, should correct the typical unsanitary surroundings of such places, and insure cleanliness among those upon whom the care of carelessness of whose persons and their surroundings depends, in a great measure, the public health.—*American Medico-Surgical Bulletin*.

MEDICAL EXAMINERS' FEES.—The Equitable Life Insurance Company has issued the following circular to medical examiners: "Please take notice that for medical examinations for new insurance in this society made in the United States, the Canadian Provinces, and Newfoundland, on and after July 1, 1896, compensation will be by the uniform fee of five dollars for each case of a completed examination-report and opinion of the risk, rendered according to the Society's standard blank form for a medical examination-report. The cost of an examination for the *restoration* of a *lapsed* policy is to be borne by the subject, and not by the Society. The fee in such case is accordingly a matter of private arrangement between the examiner and the examinee."

THE AMERICAN PHYSICIANS AND SURGEONS ASSOCIATION closed its conference in Buffalo on June 25th. The next regular meeting will be held at Indianapolis, in January. During the conference Dr. John T. Simpson, of Boston, on behalf of the Red Cross Society, of England, presented the jeweled cross of the Red Cross Society to Dr. C. Edson Covey, president, and Dr. R. C. Kelsey, secretary, of the Physicians and Surgeons Association. Among the visitors at the conference was Dr. W. B. Gentry, of Chicago, who is about to remove to Las Vegas, N. M., where he will have charge of the resort for consumptives, which George Gould and other New York capitalists are about to establish in that city.

ONLY ONE HARVARD.—President Eliot, of the Harvard University, has filed a bill in the Federal Court asking that Harvard Medical College, recently established in Chicago, be required to take some other name. It would seem that the representatives of the latter school might have exercised a little more judgment in the selection of a designation for their college. The Bulletin fails to understand how a body of learned men could entertain the suggestion even of so palpable an attempt to usurp the rights of this honored institution, and it extends to President Eliot its earnest wishes for a successful issue of his equitable demands.—*American Medico-Surgical Bulletin.*

THE PROTECTION OF BLOOD-BROTHERHOOD.—In the light of modern inoculation by the injection of blood from the immune, it has been suggested that it may be possible to protect African explorers by blood from the healthy natives. In the case of Stanley, it is known that he submitted to the transfusion of native blood some fifty times in the practice of the rite of blood-brotherhood, and it is not impossible that to this was due his exemption from the fatal fevers of that climate.—*Medical News.*

DR. BENJ. H. BROADNAX, of Louisiana, in Alkaloidal Clinic, says that

APHASIA IN POLYGLOTS.—In a recent number of the *Revue de Médecine* Dr. Pitres details a number of interesting observations with reference to the peculiarities of aphasia as it occurs among patients who were able to speak fluently more than one language. It appears that such patients do not become aphasic in the same degree for all the languages which they speak. At first, as a rule, there is general aphasia, then, as improvement occurs, the patient is able to understand and then to speak that language which he has known longest and with which he was most familiar. The capacity for use of the other less familiar languages was acquired later. Such a conclusion does not of course imply the existence of different centers for the different languages, but is merely an illustration of the fact that qualities and capabilities which are acquired latest are most easily lost or impaired by any condition which interferes with the nervous structures which underlie them.—*Lancet*.

THE New York Physicians Mutual Aid Association, composed of physicians and surgeons of the metropolitan district, has a membership of 1,333, and a permanent benevolent fund of \$25,669. A society organized after the plan of this organization by physicians in different cities, or prescribed districts, would be of incalculable advantage to members and their families in time of need.

THE VIEWS OF PROFESSOR LANGERHAUS.—Since the report of the investigation regarding the unfortunate death of his child after an injection of diphtheria antitoxin, Professor Langerhaus has published a letter in the *Berliner klinische Wochenschrift* in which he asserts his adherence to his original views concerning the death.

DR. ROPER, after suffering very much from improperly shaped bicycle saddles, due to perineal pressure, resulting in cystitis, recommends, in *London Lancet*, a saddle with ordinary peak, having a longitudinal strip cut out in the middle. This affords the required support without perineal pressure, and yet enables one to retain his seat in fast riding or turning corners.

THE SECOND CONGRESS OF APPLIED CHEMISTRY.—Prof. Charles A. Doremus has been appointed by Secretary of State Olney to represent the United States in the Second Congress of Applied Chemistry, which is to meet in Paris during the coming month.

WEEDING OUT FORTUNE-TELLERS.—The city of Cleveland, O., has enacted a city ordinance that fixes the license law tax at three hundred dollars a year for astrologists, fortune-tellers, and seers.

AN LL. D. FROM YALE.—At the last Yale Commencement Dr. William H. Welch, of Baltimore, was given the degree of LL. D.

Special Notices.

FOOD IN INFANCY.—Looking at the analyses of milk, it would seem that a small addition of water to cow's milk brings it down to human milk; while some cows require for a small addition of sugar. Nor need necessarily the sugar be cane sugar; a little maltose sugar is easily procurable, as in Mellin's Food, for instance. The advantage of maltose sugar, in whatever form, to the milk is that maltose sugar rather undergoes lactic acid fermentation, while cane sugar undergoes acetous fermentation—and acetous acid is far more irritant than lactic acid, whether free or in combination with a lactic acid.

J. MILNER FOTHERGILL, M. D., in "Manual of Dietetics."

OBESITY AND RHEUMATISM IN SUMMER.—The heavy-weight, of all others, is the most liable to be just cause for complaint in hot weather. The summer months with their excessive heat, by producing free diaphoresis, tend somewhat to reduce the weight, but the resulting lethargy and vital depression incident to this season, on the other hand, limit the normal amount of exercise and thereby tend to offset this effect. At this season of the year, the fat person suffers. His condition predisposes him to rheumatism and gout. For such people Phytoline is a boon. Aside from its fat-absorbing and eliminative qualities it meets his rheumatic and gouty symptoms as nothing else does. Recent experience shows that Phytoline, combined with Salicylate, with or without the addition of Potassium Iodide, as the case may require, is unexcelled in this condition.

A reliable formula is the following:

Phytoline, two ounces; Sodium Salicylate, two ounces; Aqua Destillata, six ounces.

M. Sig: A teaspoonful every three hours.

The addition of Potassium Iodide is frequently useful, especially if there has been a history of specific infection.

SANMETTO IN IRRITABILITY OF BLADDER IN PATIENT NINETY-ONE YEARS OF AGE.—Dr. Robert Cochrane, L. R. C. S. I., L. M., Blackhill, Coleraine, Co. Derry, Ireland, says: "I prescribed a bottle of Sanmetto for an old gentleman, aged ninety-one years. This patient was suffering excruciating pain from irritability of bladder, scarcely ever got warm in bed on account of repeated calls to void urine, in fact he was delirious. A few doses of Sanmetto gave him great relief, and before the bottle was done he had not to rise once during the night. He is going about now, hale and hearty at his advanced age."

I HAVE prescribed Peacock's Bromides advantageously in a number of cases of dysmenorrhea, uterine congestion, and difficult dentition in infants, and always with the most happy results.

JAMES B. KERSEY, M. D.

HERBST, IND.

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THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXII. LOUISVILLE, KY., AUGUST 22, 1896.

No. 4.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

NEPHRITIS IN CHILDREN.*

BY HENRY E. TULEY, A. B., M. D.

Clinical Assistant to the Chair of Practice and Instructor in Physical Diagnosis in the Kentucky School of Medicine; Visiting Physician to the Masonic Widows and Orphans' Home; Associate Editor and Manager of Mathews' Medical Quarterly, etc.

Much more attention has been paid to the consideration of this disease in late years than heretofore, but even now there is very little to be found in the literature bearing upon the subject. This is particularly the case in primary nephritis occurring in children, the text-books of recent date describing nephritis only as a complication in the exanthemata.

Classification. A nephritis may be primary or secondary, the former occurring infrequently. It may be secondary to any of the exanthemata, perhaps more frequently as a sequel to scarlet fever, rheumatism, erysipelas, acute and chronic intestinal diseases, vaccination, and pneumonia; the active causative agent in these diseases being either of primary bacterial origin or the result of the elimination of their toxins by the kidneys. A primary nephritis, however, does occur, though denied by some authors.

Pathology. The lesions of a nephritis may be classed as a "descending nephritis,"† the essential change being glomerular and epithelial, due to chemical, bacterial, or toxic agents. The other form may be called the "ascending" variety, due to invasion from the urinary

* Read at the June meeting of the Kentucky State Medical Society, 1896. For discussion see p. 136.

† Gaillard's Medical Journal.

organs below. This affects first the papillæ, and by means of the lymphatics the parenchyma is invaded, the change being toward the cortex.

Councilman* has perhaps given the most complete description of the pathological condition in renal diseases of childhood. They are represented by a simple degeneration of the epithelium and marked tissue changes. In the former there may be simple degeneration of the glomerular epithelium with or without exfoliation. If the poison acting are severe, more marked changes will occur, affecting chiefly the interstitial tissue or the glomeruli.

In the interstitial form there is an accumulation of cells between the tubules; the kidney is large, moist, whitish, and opaque. Clinically this form is a result of the exanthemata and may give rise to few symptoms.

The glomerular form is much more frequently found as a result of scarlet fever than the former. The lesion is chiefly a proliferation of the capsular epithelium with hyperplasia of the connective tissue. This form is well called the capsular glomerulo-nephritis.

Councilman also states that the acquired or primary form of nephritis differs but little from that in the adult, though children are less prone to the circulatory disturbances found especially in the chronic form in the adult.

In the text-book by Ashby and Wright it is stated that the lesion in acute nephritis of childhood is of the croupous pneumonia type; the blood-vessels are engorged, choking of the tubules results, and there occurs an exudate of the liquor sanguinis and blood corpuscles. The inflammatory changes failing to be relieved, secondary changes occur, the most important being a glomerular and peri-glomerular nephritis.

Etiology. A very valuable contribution to the literature of this subject has recently been published in the New York Medical Journal by Dr. A. Jacobi, in which many valuable suggestions are made as to the causation of this ordinarily unlooked for disease of the newborn.

While chiefly secondary in early infant life the nephritis may be primary, or at least occur without any cause being patent, and as the child approaches puberty partake more of the form found in adult life. It is a much more common disease than is generally thought, and would be recognized oftener if more systematic examination of the urine of infants and children was made. Urine can always be obtained, as catheterization at this age can readily be done.

* Rotch, "Pediatrics."

Exposure to cold or wet being the cause of a sudden change in the circulation may be an exciting cause of the primary form, Lassar* having proved the causation of interstitial and parenchymatous inflammation by sudden refrigeration. Under this head may be mentioned sea-bathing and swimming in fresh-water streams, the long exposure to the cold water being often an exciting cause little thought of. This, Danforth† states, is the case with adults, but not in childhood. Money‡ states that "spontaneous Bright's disease must be admitted." Rotch§ says that with the exception of its occurrence in scarlet fever, diphtheria, and measles the disease is not frequent.

Symptomatology. In no disease of childhood are the symptoms so varied as in nephritis. They may be so trivial as to pass unnoticed, especially when there is neglect in the examination of the urine. In well-marked cases the symptoms are pronounced and aggressive, the younger the patient the more prominently the symptoms may point to the brain, or perhaps to the gastro-intestinal tract, or to the lungs, thus obscuring the diagnosis of the true nature of the disease.

The onset generally is sudden, preceded by a chill and a rise of temperature to one hundred and two or one hundred and three degrees; the pulse is very rapid as a rule, and the tension is high. Convulsions may precede active symptoms, or perhaps supervene later. Edema occurs early, and its presence should at once excite suspicion—at first of the dorsum of the feet, ankles, and legs, then of the face, becoming general in some cases. Blindness may frequently be seen, being due to a retinitis, either simple, hemorrhagic, or colloid. Fox|| writes that in the hemorrhagic and colloid varieties of retinitis albumin is not found in the urine, this is especially so of the hemorrhagic variety, which is considered a forerunner of a non-albuminuric Bright's disease.

The urine is scanty and high colored, though there may be suppression, but catheterization will generally obtain enough urine for an examination. Albumin in a large quantity is found, microscopic examination shows granular, epithelial, and blood casts, and blood cells.

Anemia is prominent; the skin, which is of a peculiar waxy look, is dry and hot. Cough is not an infrequent symptom, and may be distressing if pulmonary edema develops to any extent. Pain, heaviness,

sleep, involuntary cries, convulsions, and coma following, are not uncommon symptoms, strabismus and dilated pupils are found frequently.

Treatment. Of all other diseases of childhood this demands the most prompt, vigorous, intelligent, and careful treatment. Three essential factors in the treatment must be recognized, viz., (a) relieve the kidney of the extra work of carrying the transuded serum from the tissues, as well as the retained products of tissue metamorphosis usually excreted by the kidney and retained because of their damaged state; (b) restore the kidney to its normal condition; and (c) endeavor by intelligent medication and diet to prevent further damage to the diseased organs.

In meeting the first indication resort must be had to the otter emunctories, the skin and the bowels, and at no age can we rely more upon them than during early life. Calomel is indispensable; it stimulates the liver to action, there being a more complete metabolism of waste materials in the blood and their excretion in the bile; by increased flow of bile the contents of the bowel are rendered more fluid and the elements to be excreted more soluble in the blood, thus proving less irritating to the kidneys. The salines are of great service as hydragogues.

Hot air baths must be relied upon for their diaphoretic action, pilocarpine is very uncertain and not to be depended on. Liquid ammonii acetatis is an efficient remedy in the stage of convalescence, acting beneficially upon the kidneys and the skin.

The high tension in the arteries can be combated more efficiently by bloodletting than otherwise; its beneficial effect being seen upon the pulse, the nervous system by ridding the blood of a quantity of toxins at once, and the kidneys by lowering the blood pressure.

A very valuable agent is water, given perhaps plain after filtration or boiling, as young children take carbonated waters with reluctance. Given *ad libitum* and at regular intervals, if the patient does not call for it, it acts as a diuretic without causing any irritation. If refused by the mouth, it acts well as enema if large ones are given. Diuretin has been recommended very highly as a diuretic in this stage, but I have not had any personal experience in its use.

The following history is reported as being illustrative of the subject under discussion:

D. M., aged eleven years, an inmate of the Masonic Widows and Orphans' Home, resident at the Home nine months, had always

been a healthy child. On October 12, 1895, she reported to the nurse because "she was getting fat in the face." There had not been any outbreak of contagious diseases at the Home, and the patient's skin was perfectly free from any evidences of disease. She had been perfectly well up to the time of admission to the Infirmary, and the edema was noticed that day for the first time. She was put to bed, but was not reported as sick until the following day. At this time there was marked edema of the face and of the feet and ankles. A specimen of her urine was ordered saved, and she was put on milk diet, pending examination.

14th. At 8 A. M. she had a general convulsion, followed in the next three hours by five more; in the interval between the convulsions there was nystagmus and twitchings of the muscles about the eyes. There was one more convulsion during the day, but the only nervous manifestations during the night were the twitchings as above described. She was very restless when awake, and complained of great pain in the head. There was complete blindness at this time, and Dr. W. B. Pusey, visiting oculist to the Home, was called in to make an examination. He reported that the examination was very unsatisfactory, owing to the nystagmus and restlessness, he being unable to obtain a satisfactory view of the fundus. When the child had been dismissed, however, he found the fundus sound and the vision normal.

The pupils were well dilated and equal. The edema was quite marked especially about the face, eyes, and lower extremities. Skin was hot and dry, pulse 160, full and bounding and of very high tension; the maximum temperature was 103 degrees. Thirteen ounces of urine were passed in the twenty-four hours; it was high colored, examination showing three fourths per cent by volume blood casts and blood corpuscles.

As soon as possible after the convulsion she was given ten drams of a saturated solution of Rochelle salts at intervals, and one fourth grain of muriate of pilocarpine hypodermatically in equally divided doses four hours apart. This did not have the slightest effect either upon the skin or the salivary glands. Eight grains of calomel were given during the twenty-four hours with a very large movement resulting. She vomited twice after the calomel had been administered. She was put in the hot air bath at this time, but no effect was noticed until the following day.

15th. Passed a restless night, twitching about the eye being noticed frequently. Pulse 160, full and bounding and of high tension.

At this time phlebotomy was done, about one ounce of blood being removed from the right median basilic vein. The effect of this withdrawal was almost immediate, the pulse fell to 104, there was less tension, and the patient seemed brighter, having taken no notice of the phlebotomy. Eight grains of calomel were given during the rest of the day, twenty-two ounces of urine were passed, and she had three movements as a result of several large rectal injections given through the day.

16th. Rested well; complains of sore throat; coughs a great deal. Examination of the chest proved negative. Vision returning slightly, can distinguish large objects and begins to recognize faces. Examination of the urine showed about one third albumin by volume, a few granular casts, blood corpuscles, and kidney epithelium. Given one ounce of the saturated solution of Rochelle salts at intervals, and one teaspoonful of liquor ammonii acetatis every three hours. Passed twelve ounces of urine and vomited three times.

17th. Rested well; edema rapidly subsiding; still coughs. Passed twenty-three ounces of urine and had two watery stools. Specific gravity of urine 1015, with some albumin, but much less than at the last report.

18th. Slight sweat in the morning, passed forty-one ounces of urine.

19th. Cried nearly all night with pain in throat. Nothing visible. Passed thirty-seven ounces of urine, had three watery stools. Put on tincture of ferri chloridi, six minims every three hours.

20th. A necrotic area of mucous membrane found on the right soft palate, extending down to the tonsil, about half an inch square. This is exquisitely painful and has a foul odor. Persulphate of iron applied every two hours. Passed twenty-four ounces of urine.

21st. Throat much better. Passed twenty-seven ounces of urine.

The following is a list of the amount of urine passed in the next few days:

22d. Thirty-two ounces, specific gravity 1014, some albumen and blood corpuscles.

23d. Thirty ounces.

24th. Forty ounces.

25th. Forty-two ounces, albumin, granular casts, and kidney epithelium.

26th. Forty-four ounces.

27th. Fifty-two ounces.

First urine clear and free from albumin. Under tonic treatment with muriated tincture of iron and nourishing diet the little patient improved rapidly and was dismissed from the Infirmary in ten days, well. It is interesting to note that during the past month she has been one of ninety to have German measles, a mild attack, the urine remaining normal throughout.

The following points are of interest in connection with the above history:

Pilocarpine muriate, a perfectly fresh preparation, to the total dose of one fourth grain did not have the slightest effect upon the child's skin or salivary glands, and did cause some depression of the circulation. Hot air had little effect in inducing elimination by the skin until it had been kept up for at least twenty-four hours. Calomel proved an efficient aid in elimination by the bowel with the aid of Rochelle salts, which were borne by the stomach better than the calomel.

Bloodletting was of the greatest benefit, not only upon the heart, reducing it from 160 to 104, and lessening the blood pressure, also ridding the blood of a quantity of toxins at once. This is a remedy that should not be forgotten. The case illustrates the remarkable recuperative power of the child, not only in surviving such overwhelming poisoning of the system, but in having her kidneys to regain their former integrity.

LOUISVILLE.

EYE SYMPTOMS IN NEPHRITIS, AS SEEN WITH THE OPHTHALMOSCOPE.*

BY WILLIAM CHEATHAM, M. D.

Professor of Ophthalmology, Otology, and Laryngology in the Louisville Medical College, etc.

It is no doubt known to all present that the ophthalmoscope in many, many instances has revealed to us a nephritis never before suspected. In a large majority of cases of neuro-retinitis albuminurica seen by myself in the last twenty-three years nephritis was not even suspected by either doctor or patient: they usually report to be fitted

of much importance in prognosis. The ophthalmoscope will frequently indicate advance or recession of the trouble; the ophthalmoscope is again of much importance in prognosis, as a large majority of cases of nephritis in which the retina and optic papilla are involved do not live for more than six months or one year. There are exceptions, however, to this rule.

Anatomical lesions in the arteries, veins, and capillaries are hyaline thickening and sclerosis, thrombosis, and occlusion, said to be the result of transuding white blood corpuscles which degenerate; numerous dilatations of the capillaries, with small aneurisms. These changes are liable to occur in all parts of the circulation of the eye, but more often in the retina; we also have hyperplasia of connective tissue. When the blood-vessels extend into the intergranular layers, we then have hemorrhages; we have edema of the retina with cavities filled with coagulated fluid, granular and fatty degeneration of Muller's supporting fibers; white patches of fatty degeneration may be hemorrhage in the stage of absorption, granulo-fatty cells, or sclerosed ganglion cells and nerve fibers. Rods and cones may remain normal or become edematous; pigment may remain normal, be absorbed or become swollen; amyloid granules are found in the chiasm and optic tract.

Sclerosis of the vessels causes all these changes; more often in the retina because its arteries are end arteries with little or no collateral supply. These symptoms are more common in the terminal stage of contracted kidney, but may occur at any stage and in any form of nephritis, even in the acute scarlatinal.

I saw a case once with all the retinal symptoms well marked, in which there were no renal symptoms for six months. The patient lived, I think, about one year after I saw the retinal involvement, and six months after the urine showed derivatives. From seven to twenty per cent of the cases of nephritis show eye symptoms; one kidney and one eye alone may be involved.

Prognosis: Length of life from a few weeks, a few months, to seventeen or twenty years, the latter very rare; average of life after retina becomes involved, one year; cases with retinal hemorrhage alone are more favorable than those with fatty degeneration; recoveries more frequent in pregnant women and acute cases; hypertrophy of the left ventricle or what is called the connecting link between the kidney affection and the eye complication, is not necessary to the production of the eye symptoms.

Uremic amblyopia in chronic nephritis is usually sudden and permanent. There is an occasional recovery, with blindness; the pupil responds to light, which shows the disease to be cortical. Mydriasis is present in eclampsia; the fundus is pale, the result of vascular spasm.

LOUISVILLE.

DIAGNOSIS OF THE DIFFERENT FORMS OF BRIGHT'S DISEASE BY URINALYSIS.*

BY CARL WEIDNER, M. D.

In the classification of Bright's disease I shall accept an acute and a chronic form. In the chronic forms I shall consider three varieties, distinguished from each other according to the special histological structure of the kidney primarily and principally affected:

1. A form of nephritis in which the uriniferous tubules with their living epithelium are principally concerned in the chronic inflammatory process, parenchymatous or tubular nephritis.

2. A form in which the interstitial connective tissue is the principal seat of the process, interstitial nephritis, with the understanding, however, that in most cases we really have, sooner or later, a combination of these two forms, constituting, if localized, glomerular, if general, diffuse nephritis.

3. The amyloid or waxy kidney, a form characterized by more or less extensive amyloid degeneration, which latter may occur independently of previous kidney disease, simultaneously with amyloid changes in other tissues and organs, or which may affect the kidneys which have been previously diseased.

The examination of the urine is of utmost practical importance in the diagnosis of Bright's disease, and together with the other clinical signs it mostly aids us in making the diagnosis of the different forms of the disease. Before taking up the character of the urine in the different forms I will consider some of the urinary changes more or less common to all forms of Bright's disease. They are certain changes in the quantity, the general physical character, and in chemical composition, and the presence of certain organized morphological elements due directly to the kidney lesion.

The quantity of the urine is increased in some forms and diminished in others. The study of the causes of this quantitative increase or

* Read at the June meeting of the Kentucky State Medical Society, 1895. For discussion, see p. 136.

diminution offers a good deal of physiological and pathological interest. We may say in short that the changes depend upon the amount of blood-pressure in general, the local circulation in the kidneys in special, the condition of the blood, the nervous apparatus, and the renal epithelium. As a rule the quantity is diminished in proportion to the extent and degree of the parenchymatous changes and the diminished arterial pressure. It is subject to much variation in different periods of the disease, and it is diminished toward the end in all forms. The color is comparatively light except in the acute form, or in acute exacerbations when blood-color darkens it.

The specific gravity varies in the different forms and with the quantity voided, but it is relatively lessened in all cases on account of lessened excretion of solids, especially of urea, phosphates, and sulphates. Extreme diminution of urea often precedes an attack of uremia. The lessened excretion is due principally to decrease of the epithelium. Among the abnormal constituents present to a larger or smaller extent, either constantly or interruptedly, we have especially albumin and certain cellular and morphological elements, such as blood and pus cells, and the renal tube-casts. The albumin of most practical importance is as yet serum-albumin, while sometimes small quantities of globulin, hemialbuminose, and peptone deserve our attention. The quantity and constancy vary much in the different forms. Its presence may be accounted for by various causes. Increased arterial pressure upon the Malpighian tufts or increased venous pressure, owing to deficient *vis-a-tergo*, or the interference with the circulation by the local disease, changes in the blood itself, and particularly pathological changes in the renal epithelium, are to blame for the presence of albumin. Probably the most important factor in the production of albumin is disease of the renal epithelium. By this disease the cells lose their regulative and selective capacity which they possess in health in common with other glandular structures, and which is one of the most beautiful phenomena of healthy life, that is, to select from the blood or to reject certain substances as they see fit. Therefore the rule, that the more extensive and the more advanced the disease of the parenchyma the more marked and constant is the quantity of albumin in the urine. It is largest in the acute inflammation and in the chronic parenchymatous nephritis. Blood is found principally in the acute variety, or acute exacerbations in the chronic ones.

Most important of all the sediments of the urine are the so-called

renal tube-casts. They are more or less cylindrical-shaped bodies, always originating in the uriniferous tubules, forming a more or less complete mold or cast of the tube, differing in shape and size with the different portions of the tubule. They are the result of some coagulable material being formed within the tubules, either the result of degenerative changes in the cellular lining or the result of an exudation from the blood into the tubes, or in most instances both. The body of most casts consists of an albuminous body, so-called hyaline substance. If this alone make up the cast, forming a clear, delicate, homogeneous cylinder, it is called a hyaline cast; if it has adhering to it the loosened epithelium of the uriniferous tubule, we have an epithelial cast; if this epithelium has undergone further degenerative changes, we have the granular and the fatty casts; or we may have a true amyloid or waxy cast, giving the reaction of amyloid substance. Cylindrical masses of blood cells retaining the shape of the tubule are spoken of as blood casts, and are found in the acute form.

These tube-casts, being, as we see, the direct result of different diseased conditions of the kidney, allow us to form a retrospective conclusion upon the pathological condition of the kidney, and therefore a careful and repeated microscopic examination of the urine sediment is of the utmost value to the diagnostician and clinician. Together with the other characters of the urine and the clinical signs they help to make the diagnosis and to formulate the prognosis.

We will now pass to the consideration of the urine in the different forms of the disease. From what has been said above it is explained readily that the pathological characters of the urine must be more or less the same in different forms.

Still there are usually sufficient quantities and quantitative differences to enable us in many—not in all—cases to distinguish between the varieties by careful urinalysis.

The acute nephritis is mostly of a diffuse form; the more violent the active inflammatory process the more characteristic the urine. The quantity is always much diminished, to a few ounces to a pint in twenty-four hours, or may be temporarily suppressed. It is passed out at short intervals. This may last for days or several weeks. With improvement the urine becomes more normal in quantity, or it may be increased, especially when there is rapid absorption of dropsical fluids. Specific gravity is low in relation to the quantity, 1008, 1025. Reaction is acid. It is cloudy on account of large quantity of morphological ele-

ments, especially red and white blood cells. The color is high for the same reason, and varies from slight smoky to dark brown, according to the quantity of blood present. Albumin is present in large amount. Urea, uric acid, and chlorides are much lessened. Microscopic examination of the sediment shows a large quantity of blood leucocytes, red blood cells, either well preserved or disordered and swollen, blood casts, hyaline and epithelial casts in various stages of degeneration, and renal epithelia. The small quantity, frequent urination, the large quantity of blood elements and of albumin, and the large quantity of organized sediment help us eminently to diagnose the acute form. In other cases this is not possible, and time alone will decide the question.

For more ready comparison we will consider the chronic interstitial and the chronic parenchymatous forms together. The more typical either form, the more correct will the following table be:

1. CHRONIC INTERSTITIAL NEPHRITIS.

(a) Quantity increased, sometimes very much, so as to resemble diabetes insipidus.

(b) Specific gravity always low—1005 to 1012.

(c) Color—pale, often greenish tinge; exceptions, febrile complications, and these less than usual.

(d) Frequency of urination is increased; patient has to get up at night.

(e) Clearness—urine clear; very small amount of sediment, or none at all.

(f) Reaction—mostly acid—depends on many outside influences, food, nervous conditions, etc.

(g) Excretion of urea is lessened; often in these cases find crystals of uric acid or oxalate of calcium.

(h) Albumen—small in quantity, and may be absent temporarily.

(i) Fat—seldom found.

(k) Blood—very rare.

(l) Leucocytes and renal epithelia—small in number.

(m) Tube-casts—few in number; mostly hyaline and small granular casts.

2. CHRONIC PARENCHYMATOUS NEPHRITIS.

(a) Varying a good deal, but altogether lessened.

(b) Lessened and low in proportion to the quantity; usually between 1010 and 1018.

(c) Mostly light yellow, except in acute exacerbations.

(d) Also.

(e) Variable; often cloudy from larger quantity of organized material giving marked sediment.

(f) Mostly acid.

(g) Excretion of urea is lessened also.

(h) Albumin—always present in considerable amount, and constant.

(i) Fat—present in later stages, either from degeneration of the secretory epithelium or from exudation in the kidney.

(k) Blood—frequently present on account of exacerbations.

(l) Often large number of leucocytes and epithelium.

(m) Tube-casts—always present in the sediment in larger number of all varieties, hyaline, epithelial, granular, fatty, and waxy.

The urine in amyloid kidney resembles somewhat that of interstitial nephritis. It is mostly increased in quantity, very light in color, clear, with small amount but pretty constantly present albumin; specific gravity 1010, 1018; small amount of sediment, containing very long hyaline casts, extending frequently through several fields of the microscope. Late in the disease we frequently see very long and wide casts, often the waxy variety. Leucocytes frequently found; fatty epithelium very rare. The clinical history, more than the urine, helps to make the diagnosis of the amyloid kidney. Altogether there is no method of diagnosis of Bright's disease which supersedes in importance a careful and repeated examination of the urine.

LOUISVILLE.

THE LOUISVILLE HOME OF THE FRIENDLESS.

BY EWING MARSHALL, M. D.

Physician in attendance.

It is but tardy justice that I am meting out when I take my pen in hand to announce to the medical world the grand work that has been accomplished by the Home for Friendless Women; and before I begin it let me say that it is one of the most Christ-like charities with which it has fallen within my province to be associated.

A general hospital or special hospital deals with those that are suffering from misfortunes which come within the possibilities of the future of any one. Sickness comes to all, accidents to many, and though to-day our purse may contain sufficient to meet our needs, to-morrow it may be gone.

Orphan asylums and homes for the aged poor for the same reason touch us. But poor woman, led astray either through passion or the duplicity of man, has a ban upon her that every gentleman who has one single spark of chivalry left in his hardened nineteenth-century nature fairly riles at. Man, the co-respondent, too often goes not only scot free but receives a certain amount of adulation on account of his very perfidy, while the so-called "weaker woman" bears the scarlet letter through life and is ostracized by society; and, "pity 'tis, 'tis true," her sister woman is her severest judge, and will not hear or believe in one palliating cause for her shame.

Let the world take counsel together with the lowly Nazarene, and they will do as he, finding none without sin, will assist our misguided

sister to put behind her all her past and make a new beginning. The women of Louisville, Kentucky, are recreant to their crown of true motherhood in not in every way within their power aiding and indorsing this work. The management is constantly hampered from lack of funds, and this should not be allowed.

The Home was started first as an abiding-place, where a poor girl could stay until her time was near at hand, and then she was sent to the Louisville City Hospital with the idea that as soon as her child was a month old, she and her child would return to the Home. But there was one terrible drawback to the true work of the Home, in that the girls met baneful influences at the Hospital and were urged and almost bullied into giving up their children. They were told, the child is your disgrace! Give it away, and you can start out in the world in a new place where none may be the wiser of your sin.

This condition may be altered now; but I know when I was interne at the City Hospital, in 1884-85, often and often a baby could be born in the night, and before breakfast a woman would come with a covered basket and take the child away, fearing that if the poor mother would nurse and fondle it but a little the mother-love would spring up in her and she would not part with her offspring. Now, the world over, statistics will show that the woman that bears an illegitimate child and puts it away more often sinks to lower degradation than the one who does the best she can for her unfortunate child.

The Board of Managers, realizing this, met the difficulty as soon as it was in their power by building a hospital on Kentucky Street between Fifth and Sixth streets. Here they have arrangements to more completely carry out the idea of a reclaiming home. In the basement they have the kitchen, laundry, and dining-room. The three floors above are divided into two parts with a flight of steps going up in each, so that, if necessity demands it, they can virtually be separated into two houses. In front of this partition on the first floor we have the chapel, reception-room, parlor and telephone room. On the second floor are the matron's room, store-room, sewing-room and two sleeping-rooms. On the third floor the infirmary, drug-room, operating-room, and two sleeping-rooms. Behind this partition on the three floors are the bed-rooms, bath-rooms, and closets, and on the third floor we have the children's room or nursery, where all of the older babies are kept during the day, while their mothers are doing the work of the Home and being

taught different useful and improving things: cooking, washing, ironing, housework, sewing, reading, writing, and arithmetic.

When the board took charge of the new hospital a Medical Board was formed, which has been changed by death and resignations till only four of the original Medical Board are still connected with it, Drs. Bailey, Cottell, Dabney, and Marshall. Originally there were four visiting physicians, two consulting physicians, one consulting surgeon, and an oculist. Now they have three visiting physicians, Drs. Henry A. Cottell, Frank C. Simpson, and Ewing Marshall; two consulting physicians, Drs. William Bailey and Preston B. Scott; one consulting surgeon, Dr. John G. Cecil, and one oculist, Dr. S. G. Dabney.

We have had ninety-four confinements with only one mother's death. This was unavoidable. The young woman had a severe case of erysipelas which brought on premature delivery, and she had severe hemorrhage, which was probably caused by her depleted condition; anyhow, from the combination of the dyscrasia, anemia, and puerperal hemorrhage she succumbed within twenty-four hours after delivery.

We have had only six miscarriages and only six instrumental deliveries. Three children were born dead, one died from the mother's overlaying it in the night, and one child was born with sclerema neonatorum.

This was an interesting delivery. There was a malpresentation when the doctor made his examination, finding a shoulder presentation. One of the consultants was called with idea of performing version, but before he arrived spontaneous movements of the child occurred, the head came down rapidly, and very violent pains caused a rapid delivery before the consultant arrived. The child was found to have sclerema neonatorum, and lived not quite forty-eight hours.

The Home has been visited by diphtheria twice and by scarlet fever once. There have been a few cases of erysipelas and typhoid fever, with mumps, r  theln, malarial fever, and other minor ailments. Cholera infantum has claimed but few of our little inmates. Hereditary dyscrasia has caused the loss of most of the little ones that have died. A combination of syphilitic and tuberculous heritage is a hard thing to contend with.

Our Home during the last six years has contained from thirty to fifty people all the time. Our mortality has been extremely small, there having been only one death out of ninety-four confinements, and that

woman's death was from other than causes chargeable to the puerperal state or the fault of her attendants.

Our girls are kept until their children are at least one year old, and then they are found homes, and the members of the board keep in touch with them as long as they remain within their reach.

LOUISVILLE.

Reports of Societies.

KENTUCKY STATE MEDICAL SOCIETY.

Stated Meeting, June 10, 11, and 12, 1896, Dr. John A. Lewis, President, in the chair.

FIRST DAY, JUNE 10TH—MORNING SESSION.

The session was devoted to a symposium on the subject of Bright's Disease. Papers were read by Drs. E. S. Smith, of Hodgenville, Geo. E. Davis, of Salvisa, and R. C. McChord, of Lebanon,* and Drs. Henry E. Tuley, Carl Weidner and William Cheatham, of Louisville. [See pages 121, 127, and 129.]

DISCUSSION.

DR. JOHN G. CECIL, Louisville: Mr. President and gentlemen, I am very much embarrassed by the riches that have been spread before me in these papers, and to undertake a discussion of all of them would certainly be beyond my capacity. They have covered this important and interesting field of medicine in a most elaborate and able way. I have enjoyed them very much. I feel that the Society is benefited, and that our members have been very much enlightened by these various papers. It seems to me that the pathologists at times have been a little disposed to subdivide the question of nephritis too much. We have described too many kinds of diseased kidney. I do not bring that charge against the gentlemen who have read the papers, for the division of the subject and description of the different varieties are fully in accord with my own views. I think, however, without going into the pathological appearances of the kidney as we find it in the different forms, that a simple division, such as acute and chronic parenchymatous and chronic interstitial nephritis, is about all that is neces-

is the interstitial form of the disease which is of the greatest importance. I was particularly interested therefore in that obscure form of the disease which was treated in the able paper of Dr. Davis. This disease is one of great importance. We can not magnify the importance of chronic interstitial nephritis as examiners for life insurance companies. We find every life insurance company, no matter how poor, how cheap, magnifying this disease; in fact, it is scarcely secondary to pulmonary consumption or the various forms of tuberculosis. This particular form of nephritis (chronic interstitial) is of special importance. It is so because it affects probably the best part of our population, the most important people in the community are the very ones that are likely to be affected with this disease. It is true that it has followed very often a life of dissipation, but it is too often found in others who dissipate in work, especially brain work. We find it in our bankers, in men with large obligations of all kinds upon them. Unfortunately we find it out too late. That is the reason why I say that this variety of nephritis is by far the most important. Before we know it, the most important man in the community has an apoplectic seizure, and on *post-mortem* we find that he was the subject of chronic interstitial nephritis.

The only point I would call attention to in the paper of Dr. Davis is this: We know there is a close relationship between diseases of the arterial system and this especial form of nephritis. I believe that all authors are agreed that arterio-sclerosis is almost invariably associated with chronic interstitial nephritis, and the question comes up, which goes first? I believe that in many instances, and in most instances probably, the arterio-sclerosis precedes the chronic interstitial nephritis. If we can therefore demonstrate the fact that a man has arterio-sclerosis, we can warn him of impending trouble. "A man is as old as his arteries." Therefore, if we find a man with hardened arteries, with a second accentuated sound of the heart, subject on slight exposures to attacks of bronchitis, with nausea, diarrhea, and headaches that can not be explained, a careful ophthalmoscopic examination should be made, and usually it will give us in such cases suggestive points and often enable us to make a diagnosis long before we can make it by any other means. Any thing which will suggest chronic interstitial nephritis should be borne in mind, and I simply wish to call attention to that part of the subject.

DR. CHARLES W. AITKEN, Flemingsburg: Dr. Cecil has referred to interstitial nephritis as that form of the disease which is insidious

in its onset, and on this account we are likely to overlook it, but are not likely to confound it with some other affection of the kidney.

We are not apt to realize that we have something so serious until apoplexy occurs, or something akin to it, directing our attention to this condition. The symptoms are more marked in the parenchymatous variety than in any other. Dropsy is very prominent; the limbs are more swollen at night, the face in the morning, and inflammation of serous membranes and uremia are more likely to occur in this variety than in others. Dyspepsia is common; the skin is harsh and dry, and besides the uremic disturbance of vision, I believe we are told that we have a neuro-retinitis. But the key to the symptoms is given in Dr. Weidner's paper, namely, scant, high-colored urine, specific gravity normal or abnormal, an abundance of albumin, fatty or hyaline casts. And accompanying these symptoms we have dilatation and probably valvular lesions of the heart, which are so common that they are generally mentioned in a vast number of mortuary reports where Bright's disease is given as a cause.

The prognosis is always grave. If any of the forms of nephritis recover it is the parenchymatous variety. Recovery, however, is rare. In the treatment of this variety we should support the strength of the patient, guard against exacerbations of the disease, and meet the various symptoms of intercurrent troubles that may arise. Milk, I believe, is the diet. If any of the mineral waters be good, it is the Bethesda. Flexner's albuminate or Weil's chloride of iron are best to counteract the anemia. Strychnia will support the heart, and nitroglycerine will frequently relieve the headache. Pilocarpine accompanied with morphia may be given for the uremic toxemia, and are invaluable remedies. Morphia alone will frequently relieve the dyspnea when other things fail. To overcome the dropsy, when it becomes oppressive, elaterium and pilocarpine are my favorites. I like them better than other remedies and believe they give better results.

In reference to the interstitial form, as I remarked in the beginning, it comes on insidiously. Dyspnea, with frequent desire to urinate, may be the only symptom we have for months. It requires close observation to detect dropsy. The urine is pale in color, abundant, and probably sixty ounces or more may be passed in the course of twenty-four hours. The specific gravity is low; there is little albumin, or at times there is none. In the mixed form we will have albumin. In this form of the disease we have hypertrophy of the left ventricle with accentuation of

the second sound at the aortic interspace. Headache and insomnia are prominent symptoms. The temper becomes irritable, and the appetite capricious. We have peculiar breathing, especially in sleep for a few times and almost an arrest of breathing. This, however, is not a pathognomonic symptom of the affection. Death occurs by convulsions or coma, or by some intercurrent affection.

In the treatment of this form of the disease we should prescribe a nutritious diet, warm milk; warm, dry climate; avoid intemperance. The dyspeptic symptoms can frequently be relieved by soda, pepsin, and rhubarb. If the case can be traced to rheumatism or gout, I believe the iodides will give relief. If it can be traced to syphilis, of course we should administer mercury with the iodides. The iron preparations with albuminate will make as good a tonic as any thing for this condition.

Among the symptoms of amyloid kidney there is an increased flow of urine. A patient suffering from some pre-existing wasting disease will have to get up in the night several times to urinate. There is a large quantity of urine passed in twenty-four hours, with a low specific gravity, containing little or no albumin, but the albumin increases as the disease advances. The patient dies of exhaustion or some intercurrent affection. The treatment should be palliative unless we can remove the cause. I do not believe we have any favorable results for any period of time with this form of the disease. The parenchymatous and interstitial forms are met with in every-day practice, and they should be viewed from a practical standpoint in order that we may be as well prepared as possible to diagnose the cases early and arrest the further progress of the disease.

DR. J. B. MARVIN, Louisville: I am satisfied that time and confusion would be saved if the term Bright's disease was narrowed down to those forms of nephritis described by Bright. Amyloid kidney is not a nephritis or Bright's disease. It is purely a secondary degenerative process, depending either upon syphilis, tuberculosis of bones, or phthisis with cavities. Its treatment consists in its prevention. There is no treatment for the degeneration. Interstitial nephritis was not in the category of cases observed by Dr. Bright. It is the most treacherous, most insidious, and the least amenable to treatment. I do not think the essayists brought out that point. Only one of them barely touched upon it, and that was Dr. Tuley. The acute parenchymatous nephritis tends naturally to rapid recovery or death from uremia. We ought to

bear that in mind, and a considerable number of these cases get well with proper nursing. In chronic parenchymatous nephritis the association of anemia and dropsy makes it difficult to overlook. A point in the treatment which was not emphasized enough is rest in bed. This will diminish the albumin in the urine more quickly than any other agent we employ. The climatic treatment is good, particularly if these patients leave our climate here with its sudden changes and extremes and go south as far as Texas or Georgia, where the altitude is not too great, but where the temperature is equable and dry. I have seen patients derive much benefit by change of climate alone. It is advisable in these cases for the patient to wear woolen garments next to the skin continuously. One of the essayists condemned the use of pilocarpine. I am satisfied it is of little service when it is given by the mouth. If you employ it at all, give it hypodermatically, and it will in many cases do great good. Its depressing effect upon the heart is overcome by atropine. All the essayists spoke of the uremic symptoms in this condition and the use of potash salts. Some observers say that potash salts are poisonous. We know they are depressing, and why not substitute lithium rather than potash salts. Again, digitalis is not the best diuretic. Nitro-glycerine is preferable to it. In this condition you can give it in small doses by the mouth or hypodermically. It is fleeting in its effect and needs to be given often.

I was interested in Dr. Davis' paper. He let fall one remark, and I may have misunderstood him. He spoke of a low tension pulse, and I must disagree with him on this point. Cases are seen with a hard, high tension pulse years before interstitial nephritis is recognized, and it would be better if we possessed more of the expertness of our forefathers in the feel of the pulse, for then we would more often be on the track of an interstitial nephritis. When I get a case with urine of low specific gravity, of pale color, and a hard pulse, I suspect nephritis. When I get a high tension pulse, with hypertrophy of the left ventricle, in the absence of organic disease of the heart, occurring in any person, it is suggestive of interstitial nephritis. A high tension pulse is frequently associated in these cases with bronchitis, as has been referred to. A high tension pulse, associated with bronchitis or asthma, is a suspicious symptom developing in a middle-aged man. Diet, climate, and clothing are the best remedies. We have three agents of paramount importance for the treatment of cases in which there is a high tension pulse, and they are iodide of potassium in moderate doses, well diluted and kept up.

The next is hydrate of chloral, not by the mouth, but given by the rectum in milk. It lowers the tension of the pulse and reduces the temperature. The third agent is nitro-glycerine or nitrate of amyl. After the first dose tolerance is established, and the patient will take the remedy with impunity. You can kill cases of Bright's disease with morphia. We have two separate forms of uremia: Coma and convulsions, the latter with high tension pulse; but with low tension pulse the tendency is to coma, and in such a case morphia should be used very sparingly.

DR. W. C. DUGAN, Louisville: The point made by Dr. McChord of examining the urine in surgical cases is a very important one. I have seen several cases in which death resulted from neglect of this. Cases have been operated upon that would not have been subjected to the knife if the condition of the urine had been determined prior to operative interference. If we have to operate where the condition is such that it is a matter of life and death, as appendicitis with abscess, the surgeon should tell the friends that there may be suppression of urine from which the patient may die. We should resort more to local anesthesia in these cases, such as the use of cocaine, the spray, or the more recent method of injection of saline solution, and thus do away with general anesthesia. I simply rise to emphasize the point made by Dr. McChord and urge upon surgeons the importance of examining the urine in all cases, particularly where they use general anesthesia before subjecting patients to operation.

DR. AP MORGAN VANCE, Louisville: I desire to speak of one point made by Dr. Marvin. I have always understood that it was possible to cure amyloid kidney if the suppurating organ or bone is operated upon, or if the suppurative process can be removed. I believe surgeons generally believe that this is within the range of possibility, and I would like to ask Dr. McChord if in operating upon any of the long bones, as the hip, either by amputation or excision, it is not possible for the kidney lesion to disappear?

DR. LOUIS FRANK, Louisville: I desire to call attention to one point brought out by Dr. McChord and Dr. Dugan, namely, the occurrence of albumin in the urine in cases that are to be operated upon. We sometimes encounter cases where albumin is found, and after repeated examination of the urine we find no evidences of kidney disease whatever. But, following the administration of ether or of chloroform for the performance of some major operation, we find these

cases die of uremic coma. I have seen and lost such a case that was operated upon within the last year. Repeated examinations of the urine showed absolutely no kidney lesion whatever. Whether it is due to kidney disease, or to some other influence on the kidney through the nervous system, I do not know. We do, however, meet with such cases where there is kidney disease, and one examination, or sometimes two examinations, previous to operation will not reveal the kidney disease, so that it is a difficult matter to exclude disease here.

As to the point made by Dr. Tuley of bleeding in his case, I question very much whether one ounce of blood drawn could have caused so remarkable a result. I am inclined to believe that the improvement must have been due to some other cause. It may have been possibly the natural course of the disease.

DR. ARCH DIXON, Henderson: In connection with the point made by Dr. Dugan, I will say that less than two months ago a surgeon in our town did a vaginal hysterectomy in a patient forty-five years old. I asked him before operation if he had examined the urine. He said he had, and that there was no indication of kidney trouble, or of albumin in the urine. He did the operation nicely and successfully, but the woman had suppression of urine, and in four days was dead. I think it is necessary to examine the urine microscopically in these cases. Ether was the anesthetic used in this case, and there was suppression of urine from the start.

DR. R. D. PRATT, Shelbyville: A point brought out by Dr. Cheatham in his remarks is worthy of consideration. Oftentimes these cases, when both a chemical and microscopical examination is made and the true nature of the disease not revealed, are cleared up by the ophthalmoscope, and attention should be called to the fact that there is either present actual retinitis albuminurica or a threatened retinitis albuminurica; yet repeated examinations of the urine fail to show either albumin or casts.

There is another point that was touched upon by Dr. Weidner, and that is the importance of repeated examination of these cases in order to determine the proportion of urea eliminated. While the presence of albumin and casts may enable us to make a diagnosis of Bright's disease, the variable quantity of urea eliminated shows to what extent the kidneys have become diseased, or how they perform their function, and if examined from time to time they will show the progress of the pathological condition.

DR. R. C. MCCORD, Lebanon: I stated in my paper that conservative surgery in amyloid kidney is not good surgery. The disease is stopped if the cause is effectually removed. A point that was not brought out in my paper as clearly as it should have been was this, that death followed surgical operations for nephritic trouble. I stated that most of the disastrous results following surgical operations were due to exposure during the operation and prolonged narcosis. I think, in a great many of these cases, where the urine has been previously examined and no albumin and casts found, that death is very frequently produced by the exposure of the patient, thus setting up an acute nephritis which terminates fatally.

DR. GEORGE E. DAVIS, Salvisa: There was so much confusion in the hall during the reading of my paper that I fear Dr. Marvin misunderstood that portion of it pertaining to rest. I cited cases in which after repeated examinations had been made no albumin appeared while the patients kept in bed during the night, but when they assumed the erect posture albumin appeared in otherwise healthy individuals.

The latter part of my paper, in which I referred to the value of rest and climatic treatment, was cut short on account of my having consumed the allotted time.

DR. E. S. SMITH, Hodgenville: In regard to the use of pilocarpine I am afraid our colleague did not catch my idea. I did not condemn its use for the relief of pathological changes occurring in the beginning of the disease, but I condemned it for the relief of dropsical symptoms. I recommend it for the relief of uremic symptoms.

DR. CARL WEIDNER, Louisville: I will simply say a word in defense of the microscope. Dr. Pratt in his remarks touched me in a tender spot, and I think I can knock him out in one round. I do not believe patients with albuminuric retinitis are recent cases. It arises as a complication, and the subjective symptoms, as dyspnea, dyspepsia, up at night to pass urine, etc., may be referable to the stomach. Casts and albumin may be present or more or less abundant and there be no retinitis. Dr. Marvin is correct in saying that amyloid degeneration is not Bright's disease. It is found in many conditions in men, and the surgeon has to deal with it frequently, and the patient suffers from its effects by its affecting the vascular or glandular system or intestinal tract.

Dr. Vance spoke of the possibility of curing amyloid disease. I believe it is impossible to do this from the nature of the pathological condition. The muscular fibers are transformed into a peculiar amy-

loid body. They have lost all cell function, and there can not possibly be a revival of the cellular function. It is true that the cases may improve. For instance, occurring in a long joint affection the amyloid change may be local and not extend. Cases of sudden death after operation are obscure. In one case with which I was perfectly familiar I examined the urine and found no albumin or casts. The woman, after an operation for carcinoma of the ovary, died on the sixth day thereafter from suppression of urine and uremia. It is difficult to explain these cases. There may be a sudden exudate set up in these cases of Bright's disease by sepsis. Local shock upon the nervous mechanism of the kidney may occur; in other words, there is an inhibition of all nerve force belonging to the kidney, thus bringing about an entire arrest of the kidney secretion.

DR. MARVIN: I was not criticising Dr. Smith's paper, but simply emphasizing a certain point, and I was alluding more particularly to Dr. Tuley's paper wherein he laid stress upon the point of having given one quarter of a grain of pilocarpine by the mouth.

DR. TULEY: The pilocarpine was given hypodermatically.

Foreign Correspondence.

LONDON LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

Bethlehem Hospital; Antitoxin Treatment of Diphtheria; A New Method of Administering Chloroform; The Colonial Nursing Association; Blindness in Board Schools; Health of the City of London; Is He Mad?

A new recreation hall in connection with Bethlehem Hospital has recently been opened. Bethlehem is one of the most remarkable institutions in London. As a monastery, dedicated to Mary of Bethlehem, it dates from 1247, and since early in the fourteenth century has been connected with the care and cure of the insane. It is commonly known as "Bedlam," by which name it is alluded to by Shakespeare, in whose day it was known as "royal, religious, and ancient." It continues to be a "royal" hospital, though its management has passed out of the hands of royalty. Edward III seized it as a priory, and Henry III claimed it as his own, but eventually it fell into the hands of the civic authorities, and most of its funds have come from the city.

Dr. Lennox Brown has published an article on the antitoxin treatment of diphtheria. Dr. Brown does not on the whole take a very hopeful view

of the benefits the antitoxin treatment will bestow on suffering humanity. One hopeful fact that Dr. Brown draws attention to, and one that it is to be hoped can not be upset, is the fact that in the cases treated without serum the mortality has been reduced to at least one half of that of the best results previously obtained in England. In the report of the Metropolitan Asylums Board, which was issued on March 25th last, and which embodied the results obtained during the year 1895 in all the six metropolitan hospitals in which cases of diphtheria were treated, claims there was a reduction in the death-rate from the disease during the year of seven per cent over the year 1894. Dr. Brown contends that it is by no means proved, or rather that it is in contradiction to facts that this result has been brought about by the use of antitoxic serum, and he goes closely into the published figures to prove his point.

It is contended by a well-known chloroformist that the dangers to both heart and respiration are occasioned reflexly by the irritating action of the chloroform on the terminations of the trigeminus distributed to the mucous membrane of the nose, and that the same applies to any other anesthetic taken through the nose, and that this may be obviated by first anesthetizing the mucous membrane of the nose by using cocaine, which is an antidote to chloroform. In fifty cases in which cocaine was used in this manner the conclusions arrived at were: (1) The commencement of anesthesia is less disagreeable to the patient, who never makes defensive movements; (2) often the excitement stage is wanting, and is always slight, except in cases of alcoholics; (3) during anesthesia the patient very rarely vomits, and if vomiting does occur it is accompanied with very slight retching; (4) upon awakening the patient experiences no disagreeable sensation, and is not troubled by the after-smell of chloroform or ether. The method of preparing the patient is to direct him to blow his nose in order to thoroughly clear the mucous membrane, then, leaning forward, or sitting—never lying—to snuff a centigram of a powder, consisting of 10 per cent. of cocaine hydrochlorate and some inert substance; repeat in about three minutes, and commence general anesthesia.

A meeting has been held to draw attention to the newly formed Colonial Nursing Association. Lord Loch read a letter addressed by Mr. Chamberlain to the governors of the colonies, stating that the movement had his warm approval, and though not an official one, he wished to direct their favorable notice to it. As to the objects he would point out the great need that exists for skilled private nursing in many of the Crown Colonies, and the difficulties of a distant community in securing, without some such central organization, as it is intended this shall be, the best class of nurses suited to its particular wants. Funds will be necessary, and with these passage money and a sum to meet special requirements will be granted, with a fixed agreement, to suitable trained women. Dr. Gayle Brown, medical adviser to the home office, warmly supported the movement. It was stated at the meeting that good work was at the present time being

done by nurses belonging to the association in Matabeleland. Both at Fort Salisbury and Bullawayo these devoted ladies were at their posts in spite of great hardships, and were carrying out their duties with the utmost skill and courage.

Some two years ago Dr. Buxton published some statistics based upon the examination of children attending board schools, which led him to the conclusion that "the nation was becoming purblind." A more recent report by Dr. Brudenell Carter does not altogether indorse Dr. Buxton's conclusion, as he finds that 39.15 per cent among 8,125 board school children examined have normal eyesight, 39.7 per cent, "subnormal," as it is termed. These are children born and bred in London, the large majority the progeny of town-bred parents of the working class. Furthermore Dr. Carter finds "the enormously preponderating visual state is one of hypermetropia on the whole of very moderate degree, such as to be readily overcome by the active accommodation and the flexible lenses of early life;" in other words, fresh air and exercise would correct what is wrong in most cases, and that London children generally are in no way injured by the conditions of elementary school life. It was found that girls have worse eyesight than boys, the difference being as much as 10 per cent. Among children whose eyes are not equally efficient the right is commonly the stronger.

Dr. Sedgwick Saunders, the medical officer of health for the city of London, in his annual report for 1895, states that the day population of the city is about 319,970, and the night population 33,823. During the year 1,057 deaths were registered, including 627 dying in the city but not belonging thereto. The city death-rate was 18.3 per 1,000 per annum of the population; that for the whole metropolis being 19.4. At the Artisans Dwellings in Houndsditch, where 1,066 persons lived, the death-rate was 12.1, and the birth-rate 45.9; the latter being exceptionally high. The refuse removed from the city consisted of 72,632 cart loads, of which 30,812 represented street sweepings. The destructor apparatus had not shown the same satisfactory results as obtained in some cities, owing, he believed, to the small quantity of carbonaceous matter left in domestic dust bins in London, where coal is dear as compared with northern districts. There were seized 26,150 Australian rabbits, and condemned as unfit for human food. They had arrived in this country frozen, but became soft in transit from the ships to the cold-air stores.

Human blood has recently been kept in an unaltered state for several weeks, by placing in it ordinary test tubes under a mixture of sulphuric ether; the test tube must be tightly corked.

A visitor was inspecting the West Riding Asylum at Menston, when he doubted the insanity of a particular patient. "Try him!" said the medical superintendent; "Cry 'Tally ho! a hunting we go.'" The visitor did so, and in the twinkling of an eye the lunatic was on his back and plunging his heels into his side. The visitor was satisfied.

LONDON, July, 1896.

Abstracts and Selections.

THE DIAGNOSTIC VALUE OF THE APPEARANCE OF THE TONGUE.—

Although there have been some clinicians who have had the temerity to assert that the appearance of the tongue gives us no information of value as to the state of the digestive apparatus or the general system, physicians almost without exception examine this organ with considerable care in all important cases. While it may be true that when making a diagnosis too much importance should not be attached to this organ, it is also a fact that he who ignores it deliberately puts aside a diagnostic aid of no little significance.

The three conditions which we should note in examining this organ are its coating, its movement, and its shape. The coating, which upon the posterior part of the organ is smooth, pasty, and yellow, nearly always indicates a condition of hepatic torpor or biliousness, or, if it be white and rather dry and rough, this coating may, in an adult, point to the excessive use of milk. Again, every one with experience knows that the tongue is one of the most efficient aids to diagnosis that we have in the earliest stages of enteric fever, when it appears rather more narrow than normal, with a coated center and bright red edges. Later on its slow projection and retraction on the demand of the physician indicates clearly the degree of mental hebetude and the physical depression of the patient. The coating of the tongue in enteric fever, which is very heavy and discolored if the mouth is not well cleansed by the nurse, shows the perversion of salivary secretion and epithelial growth; and the lips and teeth covered by sordes indicate that the patient breathes through his mouth and fails to move his tongue. Again, in childhood we find three conditions of the tongue of considerable diagnostic import. One of these is the broad and flabby tongue seen in the state called by Eustace Smith "mucous disease," in which all the mucous membranes of the body are affected by a catarrhal process. Scattered through the grayish coating of such a tongue, which is usually smooth and very moist, are patches in which the epithelium and the coating have been shed, leaving red spots which have an irregular outline, somewhat resembling that seen in the markings of a worm-eaten leaf.

The second of these conditions of which we have spoken is that of the tongue in acute gastric catarrh. The coating, which is both light in weight and color, has scattered over it bright red dots which are not raised above the surface and are very numerous. Somewhat like this tongue is the so-called "strawberry tongue" of scarlet fever, in which the red fungiform papillæ project above the coating.

In advanced exhausting disease, such as diabetes or tuberculosis of the lungs, or abdominal viscera, the tongue often becomes narrow, hard, and

pointed, forming what is called a "parrot tongue," a state of this organ which speaks ill for the patient's recovery. In all grave fevers a moist tongue is a hopeful sign, and a dry tongue an evil omen.

Unilateral coating of the tongue may be due to a decayed or ragged tooth, or to a disordered function of the second division of the fifth nerve.

Discoloration of the tongue may be due to bismuth or iron, when the color will be black; to laudanum, chocolate, or tobacco, when it will be brown, and therefore any marked change in its appearance indicates the drug or food which the patient has swallowed.

The color of the tongue itself is also worthy of note, for it is extremely pale in the anemia of renal disease, of chlorosis and pernicious anemia, and cyanotic and blue in the advanced stages of those diseases which interfere with the proper oxidation of the blood.

Scars on the tongue, or the presence of freshly made bites of its edges, discovered by the patient on arising from bed, may indicate the unrecognized presence of a nocturnal epilepsy; an ulceration, if it be single, may be due to a chancre or epithelioma, in which case the cervical glands may be enlarged. Again, multiple ulcerations, if chronic, may be due to tuberculosis or to the mucous patches of syphilis. If the ulceration is acute, it is probably an attack of ulcerative stomatitis.

The movements of the tongue are also worthy of notice. If paralyzed from an attack of hemiplegia, we will find that it is protruded toward the paralyzed side, and it may become immobile in glosso-labio-pharyngeal paralysis. Tremors of the tongue not only are seen in the last stages of exhausting diseases, but in numerous nervous affections, such as bulbar paralysis and in insular sclerosis. It is also often affected by tremors in paretic dementia and chronic alcoholism. Finally spasm of the tongue may occur, generally as a manifestation of hysteria.—*H. A. Hare, M. D., Medical News.*

NUCLEINS AND NUCLEO-PROTEIDS IN THEIR RELATION TO INTERNAL SECRETION.—(R. H. Crittenden, M. D., *Medical News'* report of Massachusetts Medical Society, June, 1896.) He said that it was now known that the removal of the pancreas or liver caused death, because of the deprivation of the system of those internal secretions emanating from these glands, and influencing the general metabolism of the body. Experiments had shown that the pancreatic gland poured into the blood some secretion which destroyed the sugar in the blood, and which was absolutely essential to the maintenance of the physiological equilibrium. This was not true of all glands, at least not to the same extent. It had been shown that in the suprarenals the active principle of the secretion was obtained only in the medulla of the gland. The secretion of these glands is soluble in water, dilute alcohol, and in aqueous solutions it dialyses readily through parchment; hence the active principle can not be a proteid body. It was moreover fairly stable, and also fairly resistant to the action of the gastric juice.

Its physiological power was destroyed by the action of alkalies, oxidizing agents, and by continued boiling. It was apparently a powerful reducing body, and by oxidation, a rose-red color was produced, accompanied by a rapid loss of physiological action. It had been estimated that one eight-hundredth of a grain of the pure active principle was sufficient to produce physiological results on the heart and arteries of an adult man; hence the amount actually elaborated by the suprarenal gland must be exceedingly small.

The thyroid principle is an organic iodine compound, containing a large proportion of iodine and considerable phosphorus in organic combination. Thyro-iodine can be prepared from the thyroid glands of man and animals by boiling the glands with sulphuric acid, or treating them with digestive fluids. The iodine is in firm combination. The bulk of the compound consists of an albumin and a globulin. The physiological activity of the thyroid gland has been proven by experiment to be due to thyro-iodine, and excessive doses of this substance produce the same symptoms as large doses of the thyroid gland. To the chemist it seemed evident that the different gland cells must be endowed with a distinctive form of cell activity. Cell protoplasm, whatever its origin, has a certain uniformity of composition, and the most characteristic bodies were the nucleo-albumins and the nucleo-proteids. They are characterized by containing more or less phosphorus. Nucleic acid is a white, amorphous powder, soluble in water, and having a strong affinity for all proteids. It contains as much as ten per cent of phosphorus. But under the head of nucleic acid we had to deal with a large class of bodies, giving a diversity of internal structure, clearly suggestive of corresponding differences of function. One or more of these acids was to be found in every cell of the body, generally combined with some form of proteid. The ready convertibility of these nucleins, and the fact that many other catabolic products may be obtained from them, afford good reasons for believing that the nucleins and the nucleo-proteids are the most probable antecedents of the internal secretions.

ABSCESS OF BRAIN WITH VISUAL APHASIA.—In the *Neurologisches Centralblatt* appears an abstract of a paper in the *Prager Medicinische Wochenschrift* by Professor Zaufal and remarks on the case by Professor Pick. The patient was a woman, aged twenty-five years, who became ill two weeks before she was seen at the hospital with headache, pain in the left ear, and sickness. Eight days later—that is, a week before admission—there was a discharge of pus from the left ear. When she came to hospital there was a certain degree of stupor, the pupils were unequal, and there was severe headache. In the left ear there was evidence of an acute suppurative affection of the middle ear. Next day there was more stupor, the pulse was slowed, and there was vomiting. The right pupil was larger than the left and there was weakness of the right side of the face. In the further progress of the case the psychical condition remained about the same, but

visual aphasia showed itself. The patient was not able to name objects shown to her, although she knew them well and could describe their appearance. There was also a slight degree of weakness in the limbs on the right side, and optic neuritis. Professor Pick made the diagnosis of abscess in the left temporal lobe in the position of the second and third temporal convolution rather far back and in the white substance. An operation was carried out and an abscess as big as a hen's egg was discovered in the part indicated. Professor Pick, in his observations on the case, dwells particularly upon the localizing value of the visual aphasia. The fact that there was no hemianopsia pointed to the absence of any affection of the occipital lobe or angular gyrus, while the absence of sensory aphasia indicated the escape of the first temporal and the upper part of the second temporal convolutions. The patient made a complete recovery, a result on which both physician and surgeon are to be congratulated.—*Lancet*.

NEW TREATMENT FOR TAPEWORM.—Dr. Newington (*Medical Times and Hospital Gazette*, December 21, 1895,) gave the following for another disorder and found that the patient passed a dead tapeworm eleven feet long, of whose presence he, as well as the physician, was ignorant:

R Potass. hydriodät, gr. xxxvi;
 Iodi, gr. xij;
 Aquæ, ʒi.

Ten drops in water three times daily.

The same combination was then tried in three cases in which the parasite was known to be present and in each case it acted equally well. In still another case, which had resisted all previous attempts, the patient passed a mass of dead tapeworm and for a year had no return.

ERGOT.—Dr. Franklin H. Martin (*Journal of the American Medical Association*, March 21, 1896,) says the physiological action of ergot is accounted for by its effect upon unstriped muscular fiber. It contracts blood-vessels and hence increases blood tension. It acts upon the uterus in four ways: (1) It decreases the bulk of the organ by producing a steady tonic contraction of all its muscular fibers. (2) It decreases the whole bulk of the organ by decreasing the amount of blood in its walls. (3) By decreasing the amount of blood in the uterus it modifies materially its nutrition and decreases the amount of the menstrual flow of blood. (4) Given in large doses it produces tonic contractions of the muscular fibers, and by instituting clonic contraction of its fibers causes expulsion of bodies from its walls and cavity.

EXCORIATIONS IN CHILDREN.—Dr. Pritchard presents the following:

R Acid. salicyl, gr. viij;
 Amyli, ʒiss;
 Bismuth. subnit, ʒij;
 Ung. aq. rosæ, ʒi.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNĀ"

Vol. 22.

SATURDAY, AUGUST 22, 1896.

No. 4.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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PERSONAL HYGIENE.

John Wesley is credited with saying that "cleanliness is near akin to godliness," and in the opinion of Andrew Dickson White, the remark is an "inspired utterance," the force of which was recognized by the Christian mind only after a painful evolution through some sixteen hundred years of physical uncleanness. The ancients knew well the sanitary value of cleanliness, and the dignity which they gave to the bath and the means which they so liberally provided for its enjoyment by people of all classes is the glory of their civilizations.

When, however, the old civilizations of Europe were on the shelf, and the new civilization under the ruling of Christianity found itself in possession of the field, the bath, and with it all other sanitary precautions, fell into disrepute. "For," says the author above quoted, "out of the Orient had been poured into the thinking of Western Europe the theological idea that the abasement of man adds to the glory of God; that indignity to the body may secure salvation to the soul; hence that cleanliness betokens pride and filthiness humility. Living in filth was regarded by great numbers of holy men who set an example to the Church and to society as an evidence of sanctity. . . . St. Hilarion lived his whole life long in utter physical uncleanness; . . . St. Anthony had never washed his feet; St. Abraham . . . for

fifty years washed neither his hands nor his feet; St. Sylvia never washed any part of her body save her fingers; St. Euphrasia belonged to a convent in which the nuns religiously abstained from bathing; St. Mary of Egypt was eminent for filthiness; St. Simon Stylites was in this respect unspeakable—the least that can be said is that he lived in ordure and stench intolerable to his visitors.” In the language of an eloquent friend, “the odor of his sanctity surely smelt to Heaven.” He died at the middle of the fifth century.

It can not be said that this lack of cleanliness belonged alone to those whose lives kept them apart from mankind—ascetics, hermits, monks, anchorites, etc. They represented but the general personal uncleanness of the medieval world, and shared the distinction alike with princes, archbishops, chancellors, lords, ladies, middle-class people, peasants, and beggars. Six centuries later, when Archbishop and Ex-Chancellor Thomas à Becket fell at the hands of assassins before the altar in Canterbury Cathedral (1170), the condition of his person and clothing was filthy to a degree commensurate with his eminence and his sanctity.

As might have been expected, people who so utterly disregarded personal hygiene made no progress in State medicine, and throughout the Middle Ages pestilences raged without let or hindrance, stopping only when there were no longer any people left in its track who were susceptible to the invading disease.

No wonder that Black Death scored a mortality of 25,000,000 in Europe alone in the middle of the fourteenth century, and threatened to depopulate the world. This, with later death-dealing epidemics, the Great Plague of London, for instance, in 1665, seems to have brought the people of Europe to their senses, and the era of cleanliness was ushered in.

Sanitary science under the fuller knowledge of the causes and nature of epidemic diseases has assumed sublime proportions, and it is certain that pestilences will never again scourge civilized man as they did in that era of sanctity, dirt, and scientific darkness.

The evolution of the cleanliness idea seems to have reached its acme in this year of grace, since the nations are beginning to wage sanitary war upon the grand army of the unwashed by making bathing compulsory to the children of the public schools.

And where better could it begin than in Italy, the country where most of the achievements in holiness and in nastiness (above quoted) were instituted and carried out.

The following from the Boston Medical and Surgical Journal, July 30, 1896, gives us hope that Italy shall yet be free in the fullest meaning of the word:

COMPULSORY BATHING IN PUBLIC SCHOOLS.—In view of the present agitation for introducing compulsory bathing in our public schools the following account of the newly introduced douche in the communal school at Milan, Italy, is of some interest. The correspondent of the *Lancet*, July 11, 1896, describes the experiment as it was made on the first day, in presence of the municipal representatives, the municipal medical adviser, Dr. Bordoni Uffreduzzi, and Dr. Sacchi of the Ospedale Maggiore: "Forty boys, accommodated in a disrobing-room fitted with benches, were made to strip and then, covered only by their large drying towel, were told off in relays of five to a contiguous hall, where they were all made to take the douche. Thereafter, provided with soap, they cleansed themselves from head to foot with fresh water, and returned to the disrobing-room to dry and dress themselves. The mechanism of the douche is simple. Five small reservoirs are suspended in a row at a height of two and a half yards from the floor and furnished laterally with two chains. Pulling that on the right, the boy beneath is douched *a collonna* (in a volume of water), or pulling that on the left, he is douched *a pioggia* (in a shower). The *locale* has been modeled on the lines of similar *locales* in barracks, and may be heated in winter. Personal ablution is one of the minor virtues in which modern Italy has fallen behind her classical forerunner, and the Milanese innovation (or rather return to antique usage) may be imitated with advantage, practiced as it is under medical surveillance. "To what extent the self-assertive youth of this land of freedom will consent to being douched in batches is not easy to assert before the trial."

But this is not enough, the hygiene of the dwellings of the ignorant poor should have the careful attention of sanitary authorities.

"Ye shall know the truth and the truth shall make you free," said the Divine Founder of Christianity; and the best missionary work that can to-day enlist the true philanthropist is the teaching of the squalid poor of our great cities the truth, not only that "cleanliness is near akin to godliness," but that it is the price of health, liberty, and happiness.

Notes and Queries.

SEXUAL HYGIENE.—From an article on this subject by Dr. Thompson, published in the *Medical Century*, June 1, 1896, we take the following: "The tendency of our time, particularly the prevalent contempt for religion, makes chastity more difficult for every one, and the invert suffers far more from this than others. Instead of debasing the honorable invert by making him run after prostitutes and subsequently become the unfortunate husband of a less fortunate wife, and the father of children who suffer as much as he or more, the attempt should be made to occupy and interest him, to show him the horizons he can attain by dint of will. If chastity were a virtue in better favor, I should recommend it to physicians as a more effective remedy than to send the invert to 'puella' to prepare him for marriage and paternity. It would be better not to increase the number of husbands and fathers who are inverts or perverts. As for the invert who wishes to marry in order to have children his desire is almost criminal. If he marries for social convenience, to reinstate himself or to please his family, he should marry a woman older than himself, a woman of the world who understands every thing and accepts the situation. Those familiar with the confessions of inverts, and a marvelous lot are correlated in the works of Krafft-Ebing, will see that in the same ratio as their sexual feelings are distorted so is their conception of themselves, their surroundings, and every thing else in the world. The superior invert has no right to think he is born out of his epoch or his country. Even the Orient to-day (where pederasty is practised without difficulty) would not offer him the intellectual pleasures to which he is accustomed, music, the theatre, etc. He would see with a smile that most of the new Greeks would have been considered too sickly or too generally malformed to be reared by the Spartans. He will see with more or less courage that the satisfaction of the sexual appetite is not, and can not be, the *sine qua non* of existence to a modern man. Too long has the general practitioner given this subject over into the hands of a few specialists who see almost entirely the extreme cases, so that there is a great dearth of literature relative to its development and prophylaxis. To quote Nordan, specialists have failed to understand their duty. It is time for them to come to the front; it is no doubt meritorious to indurate sections of the spinal cord in chromic acid, and tint them in a neutrophylic solution, but this should not exhaust them. Neither is it sufficient that they should give a few lectures to jurists, and publish observations in technical journals. Let them speak to the masses of cultured persons who are neither physicians nor learned in law. Let them enlighten them in general publications and accessible conferences, concerning the leading

facts in mental therapeutics. If civic authorities deem it necessary to consult us with reference to bodily hygiene and sanitation, should we not have some jurisdiction over that more important and far-reaching field, the sanitation of the mind? Then the baleful influences of the Ibsens, Zolas, and Rousseaus might be curtailed. Then 'Heavenly Twins,' 'Jude the Obscure,' 'Trilby,' and the 'Woman Who Did' will cease to be the center of a gushing, hysterical, psycho-neuropathic circle and its followers, the faddists who follow because they have not the ability for independent thought."

INFANTICIDE BY MEASLES IN ENGLAND AND SCOTLAND.—The mortality from measles has proportions that call for more attention from sanitary authorities than it receives. There is this most significant difference between this mortality in different classes of the community: in the better sort of practice the mortality from measles is almost nil. Some practitioners with well-to-do patients have possibly never seen a fatal case of measles in their practice, though the disease is often highly pyrexial. But the number of deaths from it now in the large towns of England and Wales and of Scotland exceeds greatly the number from scarlet fever or diphtheria, or from both of these put together. This mortality has been described lately by writers in the Nineteenth Century as a form of murder. It is sufficiently illustrated in our issue of last week. Our monthly analysis of London sickness and mortality gives a mortality in June from scarlet fever of sixty-seven and from diphtheria of one hundred and seventy-three, and from both of two hundred and forty, whereas the mortality from measles was four hundred and twelve. In thirty-three of the largest English towns during the week ending July 4th, of seven hundred and twenty deaths due to the principal zymotic diseases one hundred and seventy-five were from measles and one hundred from scarlet fever (36) and diphtheria (64) combined. The case of Scotland is not much better. Of five hundred and forty-eight deaths in eight Scotch towns one hundred and nine were caused by the principal zymotic diseases; of these thirty-eight were referred to measles. Glasgow—whose physicians, notably Dr. Gairdner and Dr. Russell, have directed attention to this infanticidal disease—has a bad pre-eminence in this respect, and measles is responsible for thirty-three of the thirty-eight deaths. Such havoc of infant life can not be much longer continued without scandal and discredit to sanitary authorities. The remedy is not so easy as in the case of the other two diseases, as the infectiousness is greater and has time to act before quite declaring itself. Nevertheless, ways must be found for improving the hygienic environment of the little patients and for anticipating the diagnosis under suspicious circumstances.—*Lancet*.

THE ANTI-VIVISECTION CRAZE.—Dr. H. P. Bowditch thus closes his able paper on vivisection read before the Massachusetts State Medical Society, June 6, 1896. There is usually less suffering in connection with

the animals operated upon or killed in the laboratory than there is in these animals in a state of nature. Aside from a feeling of mercy, the physiologist, for the sake of convenience, uses an anesthetic, in order that the struggling and cries of the animal may not distract his mind from the subject in hand or derange his delicate instruments. It has been calculated by Professor Yeo that seventy-five per cent of the animals are rendered absolutely unconscious to pain by the giving of an anesthetic, but the mere administration of an anesthetic to an animal is not an agreeable process as to the human subject. In trifling operations it is much better, probably, for the animal not to give an anesthetic. Of the twenty-five per cent of operations done without an anesthetic, it is probable that twenty per cent are about as painful as vaccination, four per cent as painful as the healing of a wound, and one per cent as painful as an ordinary surgical operation performed without an anesthetic.

Now, what have we gained from vivisection? The foundation of our science—the discovery of the circulation of the blood—was made possible only by examinations on living animals. The proper mode of applying ligatures to arteries and the antiseptic treatment of wounds have reached their present state of perfection chiefly by experiments on animals. The surgery of the past has been robbed of much horror simply by this introduction of the use of the ligature instead of the use of torturing hot irons. The therapeutic use of antitoxin in diphtheria shows already that the physician has within his grasp the means of successfully treating one of the most dreaded of diseases. Who will dare to say that his boon has been dearly purchased by the lives of a number of guinea-pigs? Commercial experiments illustrating the danger to life of sewage-polluted water have cost many thousand human lives, whereas the knowledge which has enabled us to guard successfully against cholera has cost the lives of a few mice! We should remember the words of Him who said: "Ye are of more value than many sparrows."

ECTOPIC GESTATION.—(Medical News' report of the Massachusetts Medical Society, June, 1866.) M. H. Richardson, M. D., of Boston, gave an abstract of his paper on this subject. Referring particularly to the diagnosis and treatment, he said it was admitted generally that conception took place, in the vast majority of cases, in some part of the fallopian tube. The observations regarding the occurrence of abdominal pregnancy are now believed to be unreliable and misleading, and that supposed cases of abdominal pregnancy are really due to rupture of a tubal gestation. Out of sixty thousand cases treated in Braun's clinic in seven years, only five were extra-uterine pregnancies. Formad, in 3,500 autopsies, found thirty-five cases. Modern observations, however, show that it is by no means so infrequent. In one year, at the Massachusetts General Hospital, out of about three hundred laparotomies there were twelve operations for extra-uterine pregnancy. He had seen several cases in which rupture of a tubal

pregnancy had taken place before the time of the occurrence of the next menstrual period. The commonest variation in menstruation is that in which the flow is delayed for a few days or weeks, and when it does begin is usually scanty or irregular. It had been found that under the microscope differentiation could not be made always between the decidual shreds and those passed in some cases of dysmenorrhea. The diagnosis of extra-uterine pregnancy was not usually difficult. He had known it to be mistaken, however, for a simple miscarriage, and also the diagnosis of extra-uterine pregnancy to be made in cases of subserous fibroids. Between rupture of an extra-uterine pregnancy and rupture of other sacs the diagnosis was often very difficult. Hemorrhage from chronic salpingitis and from other sources made it impossible to establish the diagnosis in the absence of the usual signs of pregnancy. Under special conditions the policy of palliation might be employed, but ordinarily prompt laparotomy was the only proper course. Were the objections to laparotomy tenfold greater, he would still recommend this operation as the best and safest method of treating extra-uterine pregnancy. In intraperitoneal ruptures immediate abdominal section was demanded in every instance, except where the patient was evidently moribund. With prompt resort to these modern methods of treatment, he thought, in time the mortality from extra-uterine pregnancy would be as slight as the mortality is now from normal pregnancy.

METHYLENE BLUE IN CHYLURIA WITH FILARIA NOCTURNA IN THE BLOOD.—In the *New York Medical Journal* of June 15, 1895, Dr. Austin Flint and Dr. Joseph W. Henry stated that methylene blue given in two-grain doses every two hours was very beneficial in parasitic chyluria; but Dr. F. P. Henry describes very fully in the *Philadelphia Medical and Surgical Reporter* of June 20, 1896, a case of that disease in which he administered two-grain capsules of methylene blue every three hours—sixteen grains per diem—from March 12th to 21st, and ten grains per day in divided doses of two grains from March 21st to 29th. The case has been already mentioned in our columns. The patient had been recently confined; her urine and feces were stained deep blue, and her milk was at last slightly stained; the infant's feces and urine also had a bluish tinge. The methylene blue was absolutely without effect on the vitality of the filariæ. Before taking the methylene blue the patient had two grains of thymol every three hours for a time, during the whole of which the filariæ were abundant in the blood.

TRANSIENT AMBLYOPIA DURING LACTATION.—In the last number of the *Neurologisches Centralblatt* appears a short abstract of a paper in the *Beiträge zur Augenheilkunde* by Dr. Karl Heinzl. He describes four cases of transient blindness occurring during lactation and traceable to interference with the functions of the nervous system. Such a condition, according to Dr. Heinzl, is apt to occur in otherwise healthy women. The first

symptoms may manifest themselves before the birth of the child or during the early period of suckling, and consist of interference with the function of the eyes which may proceed to complete blindness. With the ophthalmoscope may be found evidences of more or less inflammation of the nerve. The duration of the symptoms extends over months and usually leads to a partial degree of optic atrophy with perhaps only a just perceptible interference with visual acuteness, and never to permanent blindness. The inference that lactation is in some way connected with the symptoms in these cases was arrived at by a process of exclusion.—*Lancet*.

SYMPHYSEOTOMY, AFTER-EFFECTS.—A study of the after-effects of this operation is presented by Edward A. Ayers, from a table of 73 cases compiled from the letters of 44 operators in Canada, the United States, and Australia. In 44 of those cases no motion in the symphysis was found after recovery; in 19 there was slight motion, two with a quarter-inch, and one with a half-inch movement, but none with persisting defect of locomotion. It is to be remembered that in the majority of parturient women some motion is to be found at the symphysis to the extent of an eighth to to a quarter of an inch. Pain over the sacro-iliac region has been temporarily present in some cases. Injuries to the bladder, of which there were two instances, should be avoidable. Care in bandaging and supporting the pelvis, followed by a long rest in bed, seems to be efficient in producing good results. Under favorable conditions, when symphyseotomy is performed early as the operation of election, the maternal mortality has been only a little above two per cent.—*Dr. Chas. W. Thompson in Boston Medical and Surgical Journal*.

REMARKABLE INSTANCE OF THE APPRECIATION OF THE PASSAGE OF TIME DURING HYPNOSIS.—At a recent meeting of the Society for Psychical Research, Dr. Milne Bramwell related the case of a young woman who in a state of hypnosis showed a remarkable power of appreciating the passage of time. The subject of experiment was nineteen years of age and had received an ordinary board school education, during which and since she had not shown any extraordinary capacity of calculation. Before treatment the patient had suffered for about twelve months from functional nervous affections, but at the time of the experiments she was in excellent health. The experiments consisted in suggesting to the patient during hypnosis that she should perform a simple act at the expiration of a certain number of minutes, such as making a cross with a pencil on a piece of paper, and at the same time writing down the time she thought it was when she did this. The interval suggested varied in the course of the experiments from a few hundred to over 20,000 minutes. Sometimes six such suggestions were made at the same time, and started from different imaginary hours. For example, at four o'clock one day she was asked to fulfill the suggestion in 10,080 minutes, starting from ten o'clock the pre-

vious day, etc. Fifty-five such experiments were made, with only two failures. An interesting fact was that on awaking the patient had no recollection of what had been suggested and never complained of headache or gave any indication of nerve exhaustion.—*Ibid.*

ANALGESIA of the trunk of the ulnar is said to be characteristic of locomotor ataxia. The mode of testing, according to American Medico-Surgical Bulletin, is by pressure on the nerve in the intercondylar notch at the elbow and noting the effects as to pain or parasthesia in the distribution of the nerve. This symptom is not constant in females. Among men it is pathognomonic. May be utilized in detecting malingering, also as between epilepsy and hysteria, as analgesia is frequently found in epilepsy.

THYROID GLAND IN SEVERE SYPHILIS.—The patient, twenty-five years of age, had lost the *alæ nasi* and the upper portion of one ear by ulceration, and the general condition was very bad. The beginning dose was two grams, increased to fourteen after a time, of the fresh gland chopped up and eaten with bread, butter, and salt. Every second day the treatment was interrupted for twenty-four hours. After five days there was marked improvement and a cure in five months.—*Gouladse, Méd. Mod.*

BERIBERI AND DRINKING-WATER.—The British Medical Journal gives a brief account of two epidemics of this disease occurring on board vessels whose crews were perfectly healthy until they were forced to take water from ports where beriberi was prevalent. About four or five weeks after beginning the use of this water, the disease made its appearance, this period corresponding very closely with the recognized period of incubation for the malady.—*Medical News.*

FOLLOWING are some of the senile affections of the mind: Mania, ending frequently in dementia, although recovery has been observed. Melancholia, said to be the typical mental disease of old age. Hallucinations, quite frequent, probably connected with atheromatous condition of arteries. Senile paranoia—arterio-sclerosis—is noticed, and moral insanity, manifested by kleptomania, murder, and moral offenses.

A CASE of nocturnal dyspnea not resulting from pulmonary or cardiac disease, is ascribed in the *Bulletin Gen. di Therapeutique* to the non-elimination of ptomaines generated in the alimentary canal during sleep. The writer thinks that essential asthma is always due to auto-intoxication. A third thought of this observer is that gout is to the arteries as rheumatism is to the heart.

HAY FEVER.—

R Zinci valerianat, gr. i;
Pil. asafetidæ co., gr. ij.

Make pills No. 1. S: Two or three times a day.

Special Notices.

FERRATIN FEEDS THE BLOOD.—There is no empiricism in treating impoverished blood conditions with Ferratin; there is no guess-work. It has been physiologically proved by eminent authorities, such as Schmiedeberg, Filippi, Jaquet, and Chittenden, that Ferratin is the natural form of iron absorbed and assimilated as "the reserve iron for blood reformation;" other tests have shown that without Ferratin the organism is not nourished and will expire; and the clinical tests of Germain See, Jaquet, Harold, Einhorn, and hundreds of general practitioners have demonstrated that Ferratin increases hemoglobin, appetite, weight, etc., and quickly restores good health.

LACTOPHENIN.—The combined antipyretic, analgesic, and sedative effects of Lactophenin, with perfect freedom from the untoward symptoms caused by similar products, commend it for preferred use to reduce fever in all indicated cases. It lowers the temperature promptly (in four to eight grain doses), the effect is lasting, and the soothing influence is particularly grateful to the patient. These facts have been substantiated by clinical tests of R. V. Jaksch, A. Jaquet, Landowski, Strauss, Liebreich, and many American and European physicians.

PAPAIN (Boehringer's) is a vegetable digestive agent (the dried juice of the unripe fruit of *CARICA PAPAYA*), having the important special property of dissolving fibrine—not so much albumin—and acting with nearly equal efficiency in acid, alkaline, or neutral media. It can be used in place of, or combined with, the highest grade pepsin. Two or four grains Papain with each meal will regulate digestion and remedy and prevent stomach troubles, especially dyspepsia. Papain is also a potent taenicide, and a valuable solvent of diphtheritic membrane.

There is no opiate that serves the purpose that does Papine. Bromidia speaks for itself. Iodia is an alterative unsurpassed in its merits. I prescribe these remedies, and specify Battle & Co., because they are so well prepared that I think no drug-store or prescriptionist capable of combining their ingredients so nicely, so accurately, and all considered so reliably as they are coming from their laboratory.

J. H. GILES, M. D., West Nashville, Tenn.

I AM not in the habit of giving testimonials, and certainly would not do so until I had given the remedy a thorough and satisfactory trial. I have prescribed Cactina Pillets about five years and find them to be a very valuable preparation—much better than the modest claims made for them.

O. M. BROWN, M. D.

HOCKLEY, TEX.

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THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXII. LOUISVILLE, KY., SEPTEMBER 5, 1896.

No. 5.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

INJURIES TO THE BRAIN.*

BY WILLIAM L. RODMAN, M. D.

Professor of Surgery and Clinical Surgery in the Kentucky School of Medicine, etc., Louisville, Ky.

Injuries of the brain have ever been of surpassing interest, on account of their fatality on the one hand, and eventuating conditions worse than death on the other in a large per cent of those who recover.

I am happy to state that the surgical treatment of brain lesions has shown the same progressiveness and aggressiveness evidenced in other fields of surgery. Lives are not only being saved by prompt interference, but asylums are being robbed of many victims who would find their way into them without it.

It is unquestionably in injuries of the brain, rather than in its diseases, that surgery promises most. Good judgment and prompt action are essential to success. This will be made apparent when dealing with individual lesions. We should bear in mind that the bony vault or cranium is so constructed as to protect the brain unless immoderate violence be used. In this protection the membranes with their contained fluid materially assist. While a protection from violence, the very nature of the cranium prevents drainage of the brain by other than surgical measures, though it may be absolutely necessary to save life. The skull is more or less resilient, most so in the young, least so in the aged—one of the chief reasons for the former bearing all head injuries better than the latter class.

* Read at the June meeting of the Kentucky State Medical Society, 1896. For discussion see p. 182.

Time will only allow me to deal with the more important lesions, the result of trauma.

First, concussion of the brain is without doubt the condition we most frequently encounter in surgical practice. The name, though well established, is most unfortunate, indicating as it does a functional rather than organic disturbance. Modern authors are practically as unanimous in the belief that there is a lesion usually large enough to be seen macroscopically, as surgeons of other days were that the disease was purely functional or a tumefaction of the brain. The clinical history of many cases of concussion bears out modern pathology, else why should there be so many cases of insanity, epilepsy, and intractable headache if it be a functional trouble? Therefore, having righted ourselves so far as pathology is concerned, the proper treatment at once suggests itself.

A concussed brain is a bruised or lacerated organ. The lesion of course will vary greatly. Sometimes it will be in the brain tissue itself, again in its membranes, or perhaps in both. It is to be further kept constantly in mind that injuries of the brain by contre-coup or counter-stroke are far more likely to occur than such lesions in the cranium. Still fractures by contre-coup do occasionally happen.

Less than ten days ago a man was brought into my ward at the City Hospital in a well-marked attack of concussion, and since that time he has persistently complained of pain on the opposite side to the injury and nowhere else. There is no reason to doubt that the lesion in this case is upon the side opposite to the trauma. Therefore, if the inflammation the patient now has should result in abscess, as it may, I would of course be guided by localizing symptoms and not trephine over the site of the injury.

Now as to the treatment of concussion: Any violence direct or indirect which causes unconsciousness, should be looked upon as a severe injury. The rule is, I fancy, altogether too general to make light of a majority of these cases, and to give them little or insufficient attention. It is unwise to give other than a guarded prognosis in any case where there has been unconsciousness, however short in duration. No one can foretell whether the case in hand is to recover completely, or to terminate in abscess, insanity, epilepsy, or other kindred trouble. All cases, however mild, should be kept in bed, preferably in a dark room, for a week. After the shock, which should be treated by the recumbent position (no pillow under the head), and mild stimulation as by opium,

ammonia, and alcohol, the latter most sparingly, the stage of inflammation is reached. Here cold to head, preferably by rubber coil, purgation by calomel, the bromides to control the amount of blood in the brain, with a very light diet, constitute the best treatment. If the symptoms of meningitis or encephalitis are severe, some, indeed many, modern surgeons would trephine, even though there be no fracture, so that inflammatory fluids or exudates may be gotten rid of as they form. The majority prefer to wait, however, until there are such localizing symptoms as to indicate the best point to open the brain.

Compression of the brain may be caused by hemorrhage, depressed bone, foreign bodies, inflammatory products and tumors. The last cause we shall not consider as it is not germane to our subject. Hemorrhage may be extra- or sub-dural; more frequently, however, in surgical cases the former. When extra-dural the chances are that a branch of the middle meningeal artery gives way and a clot is formed. The middle meningeal is a branch of the internal maxillary, passes into the cranium at the foramen spinosum of the sphenoid, and soon divides into an anterior branch. One of these branches usually gives way, rupture of the main vessel being rare. The anterior branch is located by the anterior inferior angle of the parietal bone under which it runs. The posterior branch passes backward and upward grooving the squamous portion of the temporal and the parietal bone below its boss. The course of these branches must be remembered, as trephining over one with a negative result must be followed by a second opening over the other. The anterior branch, the one most often affected, is reached by applying the trephine $1\frac{1}{2}$ inches behind and on a level with the external angular process of the frontal bone; the posterior branch, by applying the instrument $1\frac{1}{2}$ inches below the parietal boss. Hemorrhage may usually be diagnosticated without difficulty. Paralysis of the opposite side, partial or complete, usually progressive, however, with a distinct interval of consciousness between the trauma and the subsequent unconsciousness almost surely indicate a clot from rupture of the meningeal. The brain can accommodate itself to a certain amount of pressure, and for this reason paralysis and unconsciousness will not occur until a distinct interval has elapsed. In rare cases the vessel pours out blood so rapidly that symptoms are practically immediate. The meningeal of one side may be ruptured by violence upon the other, and a surgeon will follow symptoms and not the wound. A large trephine should be used, or the opening of a small one enlarged with Rongier forceps or

mallet and chisel. Free access to the bleeding vessel being had, the clot is turned out, a catgut ligature in a strongly curved needle passed around the artery and tied.

Statistics show this to be an immense life-saving operation, and the "masterly inactivity" on the part of the surgeon, so much to be admired in many cases, has no place here. Prompt and accurate work alone will suffice.

Of one hundred and forty-seven cases of meningeal hemorrhage treated expectantly one hundred and thirty-one, or 89.1 per cent, died. One hundred and ten cases treated by trephining showed a mortality of thirty-six, or 32 per cent. In many unsuccessful cases the clot was not reached and removed. Modern instruments and measures should insure even better results.

Sub-dural hemorrhage generally accompanies depressed fractures of the skull, and will usually result from ruptures of several smaller vessels. It may be due to rupture of a single vessel, as the middle cerebral in the Sylvian fissure. The symptoms will be about the same as in meningeal hemorrhage; and if on trephining the skull no clot is found external to the dura mater, it should be opened and the surface of the brain inspected. The middle cerebral can be reached by the same route followed in hemorrhage from the anterior branch of the middle meningeal. The opening should be larger, a little higher, and more posteriorly. Sub-dural more than extra-dural hemorrhage is likely to be followed by cystic disease in the meninges due to partial absorption of the clot. Therefore epilepsy and other diseases are more frequently encountered in its wake. In all cases where the dura is opened, it should be done by a semi-circular incision one fourth inch from the bone, so that it can be accurately sutured after all hemorrhage has been controlled. Unless the dura is carefully sutured, fungus or hernia cerebri will likely ensue. Non-cromatized catgut should be the suture material used.

Henry Conn, age 23, living in Charlestown, Ind., was brought to me during the winter. About ten years ago he received a blow on the right side of the head just over the rolandic fissure. Soon thereafter epileptic seizures began, always initiated by movements of the left arm, after which the paroxysm would become general. It seemed to be a plain case of focal epilepsy. The epileptic habit had become so pronounced from the long continuance and frequent number of the seizures that I could give no encouragement from an operation. The matter was laid

before the brother and father in a candid way, and they insisted that I operate, understanding fully the danger of and uncertain results following operations for focal epilepsy. The patient was put in the ward of the Kentucky School of Medicine hospital, so that the statements of his family could be verified by the house surgeon, nurses, and patients. All were instructed to watch him carefully when a paroxysm began. He had a number of fits in the two weeks he was under observation, and all witnesses agreed that each began with movements of the left arm. Satisfied that the case was one of focal epilepsy, I decided to remove the arm center. With a Roberts' trephine an inch and a half button was removed over the right arm center. I pass around both trephine and button. You will observe a marked depression on the under surface of the disc, beneath which was a bluish cyst in the meninges the size of an almond. The dura was opened, cyst removed, and the arm center recognized by the battery. I pass around the double electrode of Keen which I had made for the purpose.

As soon as I placed the electrode over the arm center the left arm moved violently, standing out at a right angle to the body. No other portion of the body moved at all. The demonstration was perfect, and every student in the amphitheater witnessed it. Having recognized the center unmistakably, it was removed with knife and scissors. I followed the technique advised by Keen in the American Text-book of Surgery in every detail. I had fortunately seen him do a similar operation.

The patient suffered greatly from shock for six hours or longer. After reaction his recovery was absolutely uneventful. Temperature never rose above 99° F.

On account of hemorrhage from the meninges I left a large gauze packing in the wound, which was removed at the end of forty-eight hours. Wound healed quickly without suppuration. Although patient had a number of fits during the two weeks he was under observation prior to operation, he has now gone more than a month without a paroxysm. He looks brighter, and is more intelligent. Of course it is too soon to form an opinion as to the ultimate result. Only a few are cured, more are bettered, but the majority are not improved.

I neglected to state that the paresis of the left arm which followed the operation has disappeared, and the grip is about as strong in one hand as the other. The case will be watched carefully, and a further report made one year hence, when we meet again.

Hemorrhage may rarely follow pachymeningitis interna and should be treated by trephining, a few successful cases having been reported. Hemorrhage into the brain substance may occur and will resemble ordinary apoplexy. Such cases are scarcely amenable to surgical treatment.

The sinuses of the brain may be wounded by violence or in surgical operations. Blood will pour out very rapidly, and prompt action is necessary. It is usually a fatal accident when due to violence. The sinuses can be ligatured either in their continuity or laterally; forceps may also be left on the rent for several days, or the hemorrhage controlled by free gauze packing. I have seen the latter plan successful in a lateral wound of the longitudinal sinus.

Compression may result from foreign bodies, such as bullets, pieces of detached bone, knife blades, sticks, etc. A large trephine should be used and judicious search made for the substance. In the case of bullets it may be necessary to trephine on the opposite side if the ball is not found near the opening of ingress. The patient's chances will be enhanced by this practice, for while a ball or other foreign substance may remain as a harmless tenant in the brain for an indefinite time, it is more likely to cause abscess primarily and epilepsy secondarily. All probing should be done most cautiously with the little finger or Fluhner's aluminum probe. I have seen one case, however, where the expectant plan was pursued on account of the small size of a pistol ball which was presumably about the middle of the brain, and which has in two years done its host no serious harm.

Compression, the result of inflammatory exudates, should be met by trephining and drainage. While such action has generally been limited to abscess, Keen's advice to puncture the ventricles if necessary should be more frequently carried out.

A word as to diagnosis of cerebral abscess: The ordinary symptoms of deep-seated suppuration are conspicuous by their absence. As a rule there will be little or no rise in temperature, but possibly a sub-normal heat, and rigors, sweating, etc., are unusual. Therefore an abscess is to be diagnosticated more by the history of trauma, inflammatory and pressure symptoms, than by the evidences of suppuration elsewhere. If the abscess is large it is likely to cause hemiplegia of the opposite side. It may, however, only press upon the arm, leg, face, speech, or other well-known and easily located centers. We should follow symptoms and anatomy, and not always trephine at the site of the

wound. When the skull has been trephined the dura must be carefully inspected. If there be abscess it will be opaque and yellowish; further there will be no pulsation of the brain, and there will usually be a bulging of the dura into the trephine opening. Any doubt as to the presence of pus beneath can be settled by aspirating with a fine needle or opening the membranes. Pus being found, it is to be evacuated and the cavity irrigated and drained by a large rubber tube which is left *in situ* for some days, being shortened from time to time as necessary.

Compression, the result of depressed fracture, simple or compound, should be promptly met by trephining and elevation or removal of such depressed bone. This condition will be more fully covered under the next heading.

Fractures are dangerous directly in proportion to the accompanying injury to the brain and its membranes. Too much is thought of the fracture, too little of the damage to the brain. The dangers are immediate and delayed. Fractures are of the vault or base, the former resulting from direct, the latter as a rule from indirect, violence. Fractures of the vault are usually amenable to treatment, as the damage done can be ascertained and promptly repaired, whereas in fractures of the base the great amount of violence, the extensive injury to the brain, together with its inaccessibility, in many cases preclude surgery.

There are unquestionably moot points in the treatment of some cranial injuries. In punctured fractures with or without symptoms all are agreed that immediate trephining is the patient's only hope, for if he escapes Charybdis he goes to pieces upon Scylla. Free removal of bone, opening the dura, complete disinfection and drainage will be necessary to save life. In compound fractures with symptoms of compression we may say that all indorse immediate trephining. In compound fractures unaccompanied with symptoms of compression there is a difference of opinion as to which is the better plan to pursue. Statistics showing as they do that delayed operations are about thirty times as fatal as those done at the time of the accident, it is unquestionably better practice to trephine all such cases at the time of the accident. In simple fractures without depression unaccompanied by symptoms of cerebral injury nearly all would pursue the expectant plan. In simple depressed fractures with symptoms of compression immediate trephining is indicated. In simple depressed fractures without symptoms of compression or other intracranial mischief we find a great difference in the practice of modern surgeons. A large

number would await symptoms, following the teachings of the older masters. A larger number assume that there can not be very much depression of bone without accompanying damage to the meninges or brain, and would trephine at once. I do not hesitate to say that I believe the latter plan is the safer and more conservative one, when late sequelæ, such as intractable headache, incapacitating one for business, epilepsy, and insanity are duly considered. I admit that many who are not trephined recover primarily, but a large per cent unhappily only to develop conditions infinitely worse than death itself. Three cases seen within the past six weeks have deepened my convictions upon this point. Not one of them can ever be again what he might have been had proper surgery been practiced at the time of the accident. Two of these cases were in very young children in whom the skull is resilient and most likely to recover itself. The only argument for delay in these cases, namely, that you convert a simple into a compound fracture has, now that asepsis is accepted of all men, lost much weight.

I am proud to say that my cousin and preceptor, W. B. Rodman, a former distinguished member of this Society, was one of the very first to advocate and practice trephining in simple depressed fractures of the skull without symptoms of compression. His opinions and practice will be found recorded in an able article in the *American Journal of the Medical Sciences* published in 1877. I was a student in his office at the time and remember the criticism, some favorable, more adverse, passed upon it by the journals of the country. The elder Gross assailed him, and when I matriculated at Jefferson College in the fall, Prof. Gross, after reading my letter of introduction, said, "Your cousin has very peculiar views about fractures of the skull."

Of course it is understood that we have been dealing with local and not general injuries to the brain. Trephining can only be successful in the former class of injuries. Many injudicious operations are done in cases where the head has been subjected to crushing violence and has received a general rather than a local injury.

We now come, lastly, to the subject of fractures of the base, almost always the result of indirect violence. They may occur in any of the three fossæ at the base of the skull. They are more common in the middle fossa, the most fatal in the posterior one. The diagnosis of fractures of the anterior fossa will be made by subconjunctival ecchymosis appearing in twenty-four to forty-eight hours after the injury. The escape of considerable blood from the ear, followed by a straw

colored fluid, especially if this fluid be increased when the patient coughs, sneezes or makes other expiratory efforts, will almost surely indicate fractures of the middle fossa. Fractures of the middle fossa may exist without these symptoms, for, if the petrous portion of the temporal be fractured and the drumhead remain intact, blood and the cerebro-spinal fluid can not escape. Fractures of the posterior fossa show in addition to other symptoms an ecchymosis over the mastoid. The chief features to be kept in view in dealing with fractures of the base are drainage and disinfection. These cases die from sepsis because they are always compound fractures, and now that we can in a measure prevent infection from without, the mortality is not nearly so high as formerly. In fractures of the anterior fossa the nose, the mouth, the orbit, if any of them be punctured and a fracture results, should be carefully disinfected. In fractures of the middle fossa the external auditory canal should be thoroughly cleansed and disinfected. It is also well to bear in mind the fact that these fractures, even though the drum membrane be intact, are still compound ones, for they communicate with the external air through the eustachian tube in the naso-pharynx.

LOUISVILLE.

VAGINAL HYSTERECTOMY.*

(An Abstract of a Paper.)

BY WILLIAM H. WATHEN, M. D., LL. D.

Professor of Abdominal Surgery and Gynecology in the Kentucky School of Medicine; Fellow of the American Gynecological Society and of the Southern Surgical and Gynecological Society; Gynecologist to the Kentucky School of Medicine Hospital and the Louisville City Hospital, etc.

The author said: "While it is true that many diseased conditions in the pelvis and lower abdominal region, formerly treated surgically by the suprapubic method, are now treated *per vaginam*, it is not true, as may be inferred, that there is any antagonism in the choice of these methods. There are excellent surgeons who prefer one method to the other, but this does not indicate that many diseases can not be treated equally well by either method. Most tumors arising in the abdominal cavity, or extending high up into the abdominal cavity, may be more easily and more successfully removed by the suprapubic route, but it is equally true that nearly all pathological conditions within the pelvis, not extending to abdominal structures, and some tumors arising in

* Read at the June meeting of the Kentucky State Medical Society, 1896. For discussion see p. 185.

the pelvis but extending into the abdominal cavity, may be more successfully operated upon *per vaginam*.

"Since many diseases in the pelvis may be successfully treated without removal of the uterus, the ovaries and tubes of both sides being sometimes left, conservatism may be of practical value in preserving the generative organs of women. If the uterus is capable of bearing children and one healthy tube and ovary can be left, such a womb ought not to be removed. Unilateral pus tubes firmly adherent, small myomatous tumors in the broad ligaments, or in the anterior or posterior uterine wall near the cervix and not extending to the mucosa, extra-uterine pregnancy in the early months, and small ovarian, parovarian, and intraligamentous cysts may be removed through the anterior or posterior vaginal fornix without injury to the uterus and without removal of both adnexa, the patients making uninterrupted recoveries. There is no case of pus in the pelvic cavity where the adhesions do not extend high up in the abdomen, reaching the appendix, etc., that can not be treated as successfully *per vaginam* as by the suprapubic method, and in most cases the operation is less dangerous, convalescence more rapid, and there are fewer post-operative complications.

"The argument against vaginal hysterectomy based upon the belief that pelvic adhesions can not be separated because they can not be exposed is erroneous, for experience has proven the contrary. Nearly all adhesions in the pelvis that should be separated can be brought within view as perfectly by the vaginal as by the suprapubic method, and where the pus is not confined to the tubes, so-called encysted peritonitis, with layers of intestines matted together by inflammatory exudations, shutting off the pus from the abdominal cavity, it is better that no attempt be made at separating the adherent intestines, for they are often so evenly arranged that the feces and gas will pass uninterruptedly, and the vaginal operation will symptomatically cure these patients. These are the cases that usually recover in vaginal hysterectomy, but if operated upon through the abdomen the peritoneum is necessarily soiled, and if the pus is virulent there is the probable danger of sepsis. But barring the danger of sepsis the intestines may be torn in efforts to break up adhesions, or if successfully broken up without injury to the bowels, the extensively wounded intestinal surfaces may finally become irregularly adherent so that the condition is worse and more dangerous than the adhesions when left in vaginal hysterectomy. Every experienced laparotomist knows the truth of this assertion, for

he has seen ample proof of it in secondary operations. Adhesions to the uterus can be separated as the operation progresses without danger of wounding any vital structure, and when this is done, and the cervix amputated and the uterus bisected, after having clamped the uterine arteries, each half may be exposed externally, drawing down the ovaries and tubes so that the fingers will reach above to points of cleavage, and enucleate as easily as in a laparotomy."

The author concedes that we can not always positively say if the disease can be entirely removed *per vaginam* and that a laparotomy will not be necessary, but these cases are infrequent and in no sense argue against vaginal hysterectomy. He is pleased to see that the prevention and cure of pelvic diseases by vaginal section and drainage is now being especially emphasized, and if correctly understood will result in the prevention of many diseases for which hysterectomy has previously been performed, and will also prevent the extension of septic matter, following abortion or labor, into the general peritoneum or into the system.

While it has recently been argued that carcinoma uteri should be removed by suprapubic hysterectomy, it is clear that the "operation may be performed more rapidly, with less traumatism, less shock, and more speedy convalescence, *per vaginam*; and, if there is involvement of structures beyond the uterus that can not be removed by this method, any radical surgical procedure is contra-indicated, because the disease will speedily return, it matters not what method of operation be adopted.

"In myomatous tumors, either intraligamentous or retroperitoneal, or in the body of the uterus ascending high out of the pelvis, the combined operation, vagino-abdominal, should in many cases be the operation of election. While surgeons of great experience in abdominal hysterectomy may ligate the uterine arteries without great difficulty, this can not be done by the average operator. The cervix should be entirely removed, and this is more difficult and dangerous by the suprapubic method.

"In Pryor's method of abdominal hysterectomy the myomatous uterus may often be removed in a few minutes without hemorrhage, if preceded by vaginal separation from the cervix and ligation or clamping of the uterine arteries."

The author closes with the following quotation from his paper, recently read before the American Gynecological Society, on "The

Treatment of Intraligamentous and Retroperitoneal Uterine Myomata":

"Since in every hysterectomy we should, after the woman is on the operating-table, thoroughly wash and disinfect the vagina, and sometimes curette the uterus, it will require but little more time to separate the vagina from the cervix and ligate or clamp the uterine arteries, which if possible should be done in continuity near the pelvic wall beyond the vaginal branches. We may then enucleate and separate the lower part of the uterus from its attachments, being careful to hug the uterus or tumors so as not to open the peritoneal cavity. The patient having been previously prepared for a celiotomy, the abdomen is now opened and the operation completed from above. The adhesions, if any, having been separated, the ovarian arteries are ligated close to the pelvic wall, thereby practically cutting off all blood supply to the uterus or tumors. Having made a circular incision through the capsule entirely around the uterus and tumors near the fundus, which in some instances may include both ovaries and tubes, enucleation may be rapidly proceeded with, hugging the uterus or tumors so as to make no opening in the capsule; or, the capsule may be incised at any point or after any method the operator elects and which best meets the indications. The danger of hemorrhage or of wounding the ureters or bladder is reduced to a minimum. If after enucleation there is hemorrhage, it may be easily controlled by ligatures or tampon, and if a ureter is injured and is not immediately implanted into the bladder, the leakage will be extraperitoneal and the urine, passing out through the vulva, will not cause peritonitis or sepsis. The capsule may be sutured in the lower part of the abdominal wound, removing all superfluous tissue, and the incision closed above. It will be clearly seen that by this procedure, when the operation is completed, all wounded surfaces are extraperitoneal, so that there is no danger of intraperitoneal hemorrhage, sepsis, or adhesions. There will usually be no ligatures or sutures left in the peritoneal cavity except the two on the ovarian arteries; it is possible that in some instances a small catgut suture may be necessary to close connective tissue spaces on either side caused by removal of ovaries and tubes. The cavity of the capsule and the vagina may be, as conditions may indicate, loosely or tightly tamponed with iodoform gauze, so that we have double drainage, and may finally cleanse or disinfect the sac cavity and vagina by passing a stream of sterilized water or germicidal solution from above out through the vulva.

"Puerperal septic infection confined to the uterus and pelvic structures should be treated surgically, *per vaginam*, either by vaginal section and drainage, or by hysterectomy and removal of ovaries and tubes. Many such cases, if treated early before suppuration or systemic infection, may be cured by vaginal incision and drainage, but in the event of incomplete cure dangerous conditions are aborted and hysterectomy may be performed at the elective time. In sepsis, where there are abscesses in the folds of the broad ligament or in the pelvis, many cases may be cured by incision and drainage; and this treatment should be adopted in all cases where the condition of the woman contra-indicates an immediate radical operation.

"In cases where hysterectomy must be an operation of election there may be conditions that will require the vagino-abdominal or the suprapubic method.

"The following are some of the reasons why vaginal hysterectomy should be preferred to celiotomy:

"1. There is less shock and more rapid and complete convalescence.

"2. In pelvic suppuration there is less danger of septic infection from soiling the peritoneum.

"3. Absence of suture or mural abscesses and of sinuses following the use of drainage or an infected ligature.

"4. Immunity from ventral hernia.

"5. A lower mortality, fewer post-operative complications, and a more complete restoration to health in a relatively greater number of cases.

"The above are facts, as shown by the statistics of the most successful operators in celiotomy and vaginal hysterectomy; and in vaginal hysterectomy many of the cases were inoperable by any other method.

"It will thus be seen that theoretical objections to vaginal hysterectomy, unsupported by facts and reasons, are worthless when tested by intelligent experience."

LOUISVILLE.

ABDOMINAL VERSUS VAGINAL HYSTERECTOMY.***BY A. MORGAN CARTLEDGE, M. D.***Professor of Gynecology and Abdominal Surgery in the Louisville Medical College, etc., Louisville, Ky.*

The title or caption of this discussion would indicate that we have two methods of performing an hysterectomy which are interchangeable at the option or fancy of the operator. It is needless to remind those of you who are familiar with the subject that such is not the case. Each method has its indications and limitations. For instance, in fibromyomatous growths that reach to or above the umbilicus, all or nearly all abdominal surgeons would adopt abdominal hysterectomy as the operation of selection. Again, in the usual clinical forms of carcinoma uteri, vaginal removal of the uterus would be the universally accepted method of procedure. Then the dispute, if such it may be called, has to deal with the best means of treating certain intermediate forms of the affections named, also cases of pelvic inflammatory trouble requiring removal of the uterus as well as the appendages in order to entirely relieve the patient.

I feel that, in attempting to sustain abdominal hysterectomy against the recent onslaughts of some abdominal surgeons, it is just to say that there is much to improve upon in all abdominal work, and that any operation which gives perfect relief and is safe, that dispenses with a laparotomy, is a great gain. No one feels this more than the men of large experience in abdominal and pelvic work, hence the arguments in favor of the vaginal route in every case except large neoplasms have at first thought many reasons to favor them. I think the usual method of comparing the utility of the two operations works a disadvantage to the abdominal method. If the operator can prove that after vaginal hysterectomy for inflammatory disease of the uterus and appendages the patient is able to be about in fourteen to eighteen days, with no scar to disfigure the abdomen and possibly be the site of a future ventral hernia, and if, in addition to these proven assertions, he can show that his death-rate is reduced nearly or quite one half, why then at first glance the best method of operation seems established. If we execute exactly the same thing in each operation, there can be no

natural, convalescence is more speedy, scars and herniæ are at least concealed defects. But to make the comparison valuable or complete for purposes of practical deduction, other questions must be decided between the two operations.

Which is the most perfect operation? All are agreed that the operation which most perfectly removes the pathologic condition, other things being equal or nearly so, should be the procedure of preference in most cases. We grant every claim made by the advocates of vaginal removal of diseased appendages and uterus but one, and that is that in many, I fear very many, cases they do not remove the diseased structures, but content themselves in removing the products of disease, pus, and as much of the infected structures as the difficulties of the case will permit. I say this advisedly, that is after an experience embracing many abdominal and not a few vaginal hysterectomies. For further proof we have but to note the admissions in this regard by some of the most enthusiastic advocates of vaginal hysterectomy for pus tubes.

One enthusiastic writer, reporting a number of successful cases, in describing the technique of the operation says: "The ovaries if they descend into the womb are clamped and cut away, but if adherent and difficult to reach they are not to be disturbed. Their functional activity ceasing immediately after removal of the uterus makes their removal a matter of minor importance." In detailing his many successful cases this author observes in Case 10: "Diagnosis, salpingitis with metritis; operation, vaginal hysterectomy. Owing to excessive inflammatory attachments it was necessary to remove the uterus by morcellation," which reduced to English means to dig it out piecemeal. Case 14: "Diagnosis, cystic ovaries with salpingitis; operation, vaginal hysterectomy. Right ovary was found in a state of cystic degeneration and removed. The left, owing to its being embedded in inflammatory tissues, was left."

I have not quoted the gentleman above in a spirit of criticism of his work, but the method for my own experience has been as his. Now, if to leave diseased ovaries and fragments of pus tubes, or one ovary or the shell of a diseased uterus after the heart has been dug out or cut out is perfect surgery, and surgery that will stand the test of time, then statistics of the vaginal hysterectomy show better results than the abdominal method.

I am not unappreciative of the great improvement that free anterior section of the vaginal vault has added to the manipulative ease of the operation, and I am sure some gentlemen have acquired great skill in removing the myomatous and cancerous uterus, and even in enucleating certain not difficult cases of pus tubes; but the fact will ever remain that the vagina is a small operative field compared to the abdomen, that a fixed uterus and embedded appendages in a pelvic mass of inflammatory exudate can not be as safely and perfectly removed from below as from above. The combined method in many of these cases I have found most admirably adapted to the condition. After carefully separating intestinal adhesions, frequently suturing rents in the same, the pelvic mass is freed from the bladder and the rectum, an assistant rapidly encircles the vagina at its cervical attachment, passes up the broad ligament forceps which the eye and hand can accurately adjust, clamps the same, the uterus and diseased mass being now entirely cut away and removed. If sponges are properly placed and a moderate Trendelenburg position employed, little soiling of the abdominal contents occurs even in the presence of abundant pus. Free through irrigation is now practiced and the case closed above after gauze drainage below as in ordinary vaginal hysterectomy.

One strong argument against the indiscriminate employment of vaginal hysterectomy is that the most expert diagnostician can not judge of the complications to be encountered in most cases of pelvic inflammatory disease. The operation is the ideal one in cancer which has not invaded the broad ligaments; in very small, movable fibromyomatous tumors, in puerperal metritis with multiple uterine abscess, it will be the operation of selection in most cases.

It will be observed that I have not spoken so much for abdominal as against vaginal hysterectomy in what I deem the field of the former. Abdominal hysterectomy finds its only objection in the fact that it entails an incision through the abdominal wall. These disadvantages are well recognized, and remarks of mine can not make them more or less objectionable. As to the special technique, I think this should vary between supravaginal amputation and complete removal. It is my custom to amputate at the cervix in myomatous tumors in all cases characterized by infection, such as the metritis which accompanies diseased appendages, and in malignancy to remove the organ entire. Drainage is made in both cases by the vagina. In the case of growths the small button of cervix is cauterized and dilated from above and a

small strip of gauze carried through to drain the dead space resting between the closed peritoneum above and the otherwise closed cervix below. Blood and serum necessarily accumulate here and often cause troublesome phlegmons unless drained. In the complete removal a large gauze drain is made into the vagina, and the peritoneum usually not stitched, never when there has been much peritoneal contamination.

LOUISVILLE.

OPERATIVE PROCEDURES FOR PELVIC INFLAMMATION.*

(An Abstract of a Paper.)

BY LOUIS FRANK, M. D.

Associate Professor of Obstetrics and Director in the Bacteriological Laboratory in the Kentucky School of Medicine; Obstetrician to the Kentucky School of Medicine Hospital; Gynecologist to the Louisville City Hospital, etc., Louisville, Ky.

In all operative work our aim should be to obtain the best results to the patient, sacrificing as little as possible, and to do this with the least possible danger. The question of how these ends may best be obtained in pelvic surgery, and especially in that class done for the relief of inflammatory troubles, is one deserving of a great deal of attention, more so just at present than a few years ago on account of the various operations which now seek for favor. Upon the condition present in the pelvis and in the abdomen, and upon an understanding of the changes which have occurred or are taking place, should our method of operation depend.

Vaginal hysterectomy for pelvic inflammation, acute or chronic in character, has again, after a lapse of many years, as reintroduced by Pean and carried out by his followers, Jacobs, Segond, and others, been given a place in gynecological surgery. Besides vaginal hysterectomy with total ablation of the appendages, we have the operation of vaginal incision with or without removal of the appendages; we have also Kelly's operation of total ablation suprapubically, in addition to the operation with which we are now so familiar. The question between abdominal section and vaginal section for inflammatory disease does not seem to be definitely settled. It is still *sub judice*, and it is just for this class of disease that the fight between the two methods is being waged.

The operation of vaginal hysterectomy and vaginal celiotomy for pelvic disease has come to stay, although there may be some slight improvements in the manner of carrying it out. It has its advocates,

* Read at the June meeting of the Kentucky State Medical Society, 1896. For discussion see p. 185.

and there are those who discountenance it for the class of cases that we have under consideration, one surgeon of great prominence having stigmatized the subpubic operation done for pus tubes as "blind, ignorant, and cowardly." Again there are other men who are carried away by it; with them it is a fad; every thing with them is vaginal hysterectomy. They can see no good whatsoever in the abdominal route, but every woman who comes to them with disease of one or both appendages must needs have her uterus removed. With them every case is one in which this operation is especially indicated. Neither of these positions is the correct one to take. We should occupy the middle ground. In certain cases vaginal hysterectomy is no doubt to be preferred to removal of the tubes and ovaries from above, but it should be remembered that the operation is always and should always be secondary to the abdominal route. Any case which can be operated upon from below can also be operated upon from above; but not all cases which can be operated upon from above can be dealt with subpubically. Therefore I say that the indications for the vaginal operation should be and are secondary to those for abdominal section.

Now let us for a moment consider some of the indications or reasons why vaginal hysterectomy should be done in preference to the abdominal operation. They tell us first that in all cases of bilateral disease the uterus should be removed, as without the tubes and ovaries it is a useless organ capable of doing much harm, and so long as it remains the patient will never be permanently cured. This, however, is a fallacy. If the uterus is practically normal, if it is not in a septic or diseased condition, there is absolutely no indication for its removal. There would be just as much reason, if removal of the testes became necessary for double gonorrheal orchitis, to also remove a man's penis to effect a permanent cure. As a matter of fact, if the uterus is not in a septic condition, and even if it is septic, so far as the endometrium itself is concerned, which latter may be relieved by curetting at the time of the abdominal operation, we find that with the tubes and ovaries completely removed, an artificial menopause being brought about, the organ will undergo the same retrograde changes that we find occurring at the climacteric.

Men who have failed to get good results by abdominal removal of the appendages, with a normal uterus, have done so on account of lack of proper technique. For these men the vaginal operation with total removal, many times only so-called, is of course to be preferred. A

perfect and complete operation would in many instances be far more difficult from below, to avoid which they leave behind adhesions, portions of tubes, abscess sacs, which they have feared to handle from above, and they have lived in the hope that these adhesions will disappear. I have heard men say and have read in the medical press that those adhesions which remain after vaginal hysterectomy will disappear; nothing is said about those which may perhaps be left after abdominal section. This is certainly a strange pathology. In my experience I have never met, nor do I know of, a single instance where organized adhesions have been present and have ever disappeared. Their statement is not borne out by pathological research.

As to the safety to the patient: It undoubtedly is safer to the patient in a certain class of cases. The sacs, however, may fill up in the future. Jacobs' mortality was, last year when he made his report, about four per cent. The mortality of other operators was equally as high if not higher; contrast this with one hundred and seven total ablations by Howard Kelly with not a single death; contrast it with the results obtained by abdominal operations. I feel sure that the mortality is not greater.

Again, they will talk to us about quick convalescence, but they speak merely of the surgical convalescence. Abdominal operators prefer to keep their patients in bed even after they have recovered from the surgical operation *per se*; and if the vaginal operator has the welfare of his patient at heart, instead of trying to impress the profession and laity with his brilliant results, he would also keep his patient in bed just as long as the man who operates by the abdominal route. I have never allowed my cases of vaginal hysterectomy to get up before the end of the second week, not, however, because they were not able to do so; many of my abdominal cases could have gotten up at the end of the first week, but all were kept in bed for at least two weeks.

As to the sequelæ and the complications that may be met with: The sequelæ and the complications I believe are even more numerous by vaginal than by the abdominal operation. More cases of fecal fistulæ and more cases of vesical fistulæ comparatively have resulted from the vaginal operation than from the operation above the pnbes. Complications often go unseen when arising during the operation from below. The ureters are often ligated or included in the clamp, and it is not known until the patient dies. Likewise the intestines have been nipped in the ends of the clamp, and it was not discovered until a fecal fistulæ

had become established, or until peritonitis as a result of fecal leakage had occurred. These complications will not arise so frequently in abdominal surgery. When they do occur they are much more often detected at the time of the operation. I admit that they may also be overlooked, but not nearly so frequently. Then, if they should be met with, it is almost impossible in many instances to deal with them from below, and the vaginal hysterectomist must pack the vagina and then open the abdomen to deal with the complication which has arisen.

As to hernia: With a proper method of closing the abdomen, with the care that should be observed, there is little danger from hernia by the abdominal route. The vaginal operator tells us that hernia by the vaginal route does not occur. They had not occurred at that time, but now, since these cases have gone on for a while, since we have had time to observe them as we have our abdominal operations, we find that hernia does occur following the vaginal operation. Which now, think you, is easier to treat, a vaginal hernia or a ventral hernia? Notwithstanding all this we have to-day men among us who believe that every case should be operated upon by that method. Again there are men equally as violently opposed to the vaginal operation. Undoubtedly there are cases where the vaginal operation is to be preferred. There are also cases where the abdominal operation is imperatively indicated. In those instances, which in my opinion are in the minority, where the uterus itself, that is the muscularis of the organ, has been invaded by pyogenic organisms, where in other words it is in a septic condition, possibly as a result of puerperal infection following an abortion most usually, and where the appendages are to be removed, then the operation can best be carried out from below. This is an absolute indication for the vaginal route. Or, where there is a large abscess cavity in the broad ligament, it may better be handled through the vagina. Small abscesses about the cervix can also be better treated from below. Other cases, again, may best be treated by a combined method, by incising the vagina, and at the same time making an incision through the abdominal wall to guide us in our vaginal work. This is the case in multilocular abscesses in some cystomata of the broad ligaments with adhesions, and possibly in some few other conditions.

Many of these questions must yet be decided, as our experience in the different methods are so unequal as not to be properly compared.

LOUISVILLE.

Reports of Societies.

KENTUCKY STATE MEDICAL SOCIETY.

Stated Meeting, June 10, 11, and 12, 1896, Dr. John A. Lewis, President, in the chair.

[CONTINUED FROM PAGE 144.]

Dr. W. L. Rodman, of Louisville, read a paper on Injuries of the Brain. [See page 161.]

DISCUSSION.

DR. ARCH DIXON, Henderson: I wish to say a few words in regard to one point in connection with Dr. Rodman's paper, and that is the importance of resorting to measures to prevent sepsis in cases of basic fractures. Two years ago I lost a patient who had a basic fracture. The man had suppuration of the middle ear, and infection took place through that avenue. About six months ago I was called to see a case in which a man was struck on the back of the head. He was unconscious and comatose, and had been for six hours when I saw him. He had been seen by a physician previously, who had drawn the wound together and sutured it with silk. There was considerable hemorrhage. The head was shaved, prepared, and the wound opened and a large blood clot removed. I asked the question if there was any discharge from the man's ears, and they informed me that there was. The man had a chronic discharge from the ear. The point I wish to emphasize is that in all basic fractures, where there is discharge from the nose or ear, it is important to render those entrances perfectly aseptic. The ear should be cleaned out and douched with sterilized water, this being done before any thing is undertaken in the way of operation. The fissure in this case extended down to the mastoid process. With the assistance of my son the opening was enlarged with the Rongeur forceps, and with a blunt retractor the brain was raised and the wound drained with gauze. At the end of three hours following the operation the man was able to speak and his recovery was uninterrupted. I would emphasize the point made by the doctor in the latter part of his paper, that it is fully as important to render the brain cavity aseptic as it is the peritoneal cavity.

DR. W. C. DUGAN, Louisville: Just a few words in regard to this interesting subject. If there is any subject in surgery that I am par-

ticularly interested in it is fractures of the skull. I am glad to hear Dr. Rodman take the position he has in regard to concussion of the brain. I think it is a misnomer, and the literature of injuries of the brain has to be rewritten. I believe that these cases of concussion of the brain are due to injury of the organ, when you have unconsciousness coming on immediately after a severe blow. If you examine that man's brain, the chances are that in nine cases out of ten you will find an injury of the brain substance itself.

In linear fractures of the skull the inner table is known to be very friable and easily broken, and is found to be more extensively injured than the outer table. I have seen patients go around for a week perfectly conscious after having received a severe blow on the head. May be the patient complains of a little headache after a blow, and finally develops a severe headache, then unconsciousness ensues. A consultation is called, operation performed simply to see what the condition is, for they all die. If any operation is to be done at all in these cases it should be done early. As Dr. Rodman says, if we wait for the development of symptoms of compression, wait for paralysis, the mortality is then at least forty per cent; whereas, if we operate early the mortality is less than one per cent.

I would take exception in regard to the epileptic habit. That also is a misnomer. I believe the condition which favors epilepsy is due to interstitial changes in the brain and elsewhere, and hence there is no relief from operation. If we operate and the patient ceases to have epilepsy, there may have been absorption from the lifting up of bone, relief having been obtained in that way, but I do not believe in such a case that the patient had an epileptic habit, so called.

The mallet and chisel are safer than the trephine, hence are to be preferred. If we take the pains in operating to hold the chisel at an angle of ten or fifteen degrees, so that the force will be diffused through the bone, the concussion feared by some is not to be thought of. In one of the latest works, the supplement to the International Encyclopedia of Surgery, edited by Ashhurst and Nancrede, of Ann Arbor, the ground is taken that all compound fractures of the skull should be trephined, not so much for lifting up the depressed bone, but for properly closing the wound and making it aseptic, for infection with hair is sufficient to set up a fatal meningitis. The position is further taken that in simple fractures of the skull there is only one question to be considered, that is, their inaccessibility, and they should be trephined. I

think this is correct. I hardly take the view of Dr. Rodman in regard to basic fractures of the skull. I believe these cases should be more frequently operated upon than formerly, for they are almost all fatal. If we locate the depressed fragment in the middle, anterior, or posterior fossa, then open up and establish drainage, we certainly give the patient the best opportunity for relief.

DR. AP MORGAN VANCE, Louisville: I indorse every thing Dr. Dugan has said regarding fractures of the skull, but I wish to sound a warning against the use of opium in head injuries, particularly in those cases where we wait for symptoms, and the opium may mask any oncoming symptoms.

DR. R. C. MCCORD, Lebanon: I wish to bring out one point in injuries of the head, that is, the uncertainty of determining whether there is a fracture of the skull or not. I do not think any man, without cutting down on the skull and making a thorough examination, can say positively that there had been a fracture of the skull.

DR. RODMAN (closing): I fully agree with Dr. Dugan that the mallet and chisel are preferable to the use of the trephine. In the last case I operated on I used them. It was a case where I could not have done otherwise. The man was brought from a town in Indiana with an enormous depression of the skull, and the case was seen by Dr. Dugan and other members of the Surgical Society of Louisville. The depression was very marked. An egg would rest in it without difficulty. This depression had been there for four years. I made a small trephine opening first to enter the cranium, then I took a larger trephine and with mallet and chisel removed a large button of bone with Rongeur forceps. You could see the dents in the dura. If I had used a trephine for this enormous depression I would have done damage to the brain substance.

I fully agree with what has been said about the importance of preventing sepsis, which leads me to say that in all cases of fracture the entire scalp should be shaved. I know that women will object to this being done and obstruct you in every way. No matter how beautiful the head of hair, I insist that in any operation of this kind where trephining is necessary, the entire scalp should be shaved. If you get simply a hair in a simple fracture, you may induce sepsis in this way and life be destroyed thereby.

In regard to fractures of the base of the skull I fear Dr. Dugan did not understand me. I advocated complete drainage and disinfection,

and this can not be done without entering the cranium. If you have a fissured fracture of the anterior fossa, or a man falls with a lead-pencil in his mouth and it goes up into the cribriform plate of the ethmoid, the only possible way to remove it is with mallet and chisel, then irrigate and disinfect thoroughly. The same is true of the middle and posterior fossæ. It is impossible to render aseptic the middle fossa of the skull, because even if you cleanse the external canal you can not the eustachian tube which communicates with the pharynx. You must be careful, or else you may poison the patient in attempting to disinfect the mouth.

SECOND DAY—THURSDAY, JUNE 11TH.

Dr. William H. Wathen and Dr. A. M. Cartledge read papers on Hysterectomy, Vaginal *versus* Suprapubic. [See pages 169 and 174.] Dr. Louis Frank read a paper entitled "Operative Procedures for Pelvic Inflammation." [See page 177.]

DISCUSSION.

DR. L. S. McMURTRY, Louisville: As is often the case in the discussion of any subject presenting two sides, particularly a subject like the one before us, the correct position is midway. The operation of attacking pelvic organs for inflammatory disease and other tumors by the vagina is not new. This is the method that Battey practiced in his first operations, at the time when ovariectomy was performed by him, and which he called normal ovariectomy. He operated in his first case by the vagina. Pelvic surgeons have never, in inflammatory disease of the pelvic organs, discarded the vaginal route as a mode of attack. There are many cases where there is extensive suppurative disease of the uterine appendages, extending beyond the appendages into the peritoneum, where the condition of the patient will not permit a thorough operation. And it has been the custom of pelvic surgeons all these years to attack such cases by the vagina and drain them thoroughly. The French have never succeeded equally as well as the Germans, English, or Americans in abdominal work. The operation that has now been introduced into this country is of French origin. French surgeons have always had great skill as operators by the vaginal route. We have skilled gynecologists in America who have never taken very kindly, or have had satisfactory results by the suprapubic operation. They are experts in the vagina. Emmet is at the head of a school of that kind. The French surgeons, such as Richelot, Segond, and Pean can perform

operations by the vagina that are very much like sleight-of-hand performances. These men have popularized this method. What we want to decide as practical men is not the comparative advantages of any operative method. In the first place, we want to know which method enables us to accomplish results that we undertake the best. What are the objects we wish to attain by operations on the pelvic organs for inflammatory disease? In the first place, we want the greatest preservation of structures that is compatible with thorough and complete surgery. In the next place, we want to be able to do an operation that will result in a complete cure of the patient, if possible, and not necessitate additional operative procedures. There is undoubtedly a field for vaginal hysterectomy in inflammatory diseases of the pelvic organs. The field is certainly very limited, so far as operating for fibroid tumors is concerned, very limited indeed, but there is a field for it in operating for inflammatory diseases of the pelvic organs. There are certain cases where, as I have stated, French surgeons universally have followed the course of attacking diseased organs in the pelvis by the vagina, and establishing drainage. These cases do not permit of extensive surgery. There are cases that have been indicated in the admirable paper of Dr. Frank, where the uterus itself has become septic, and the disease has extended to the surrounding tissues besides, in which an operation of simply removing the diseased structures would not be complete by removing the uterine appendages, the separation of adhesions and drainage. These cases are admirably treated by vaginal hysterectomy, but I submit that this operation of vaginal hysterectomy, introduced in this country as a novelty, has been carried to just as great an extreme by many operators as the original operation of removing the uterine appendages was when it was first introduced. I have seen uteri exhibited at societies that were removed for inflammatory disease of the uterine appendages that were practically normal. That is to say, the uterus was normal; and I am sure that there should be no place in surgery for such an argument as this, that you remove the uterus from the fact that it is no longer of any use. If it is not diseased, it does not do any harm, and you simply remove it because it is no longer of any use. It is not a sound application of the principles of surgery. There is additional shock from the operation, and it is unnecessary.

In the next place, the great advantage of a thorough piece of pelvic surgery is in knowing when you get through what the condition of the inside of the abdomen is that you have closed. You can watch the

case through its convalescence, treat it intelligently, and if it should become necessary to re-open the abdomen, you can do so to much better advantage; and it sometimes does become necessary to do this. There is no surgeon who has become so familiar by operations in the abdominal cavity that he can beforehand indicate with any degree of absolute precision what the condition is before he opens the abdomen. He can not do it. No man pretends to do it. When you operate by the vaginal route for inflammatory disease you simply take it for granted that you remove every thing—the uterus, the appendages, if they can be dug out. You may remove them both, but you subject the patient to the danger of having in her abdomen additional foci, additional pools of pus shut off by adhesions between the intestines. If these are left behind they will continue to be a source of disease for the patient afterward. If you should operate by the suprapubic or abdominal route you have before you the organs. You have an opportunity to examine them. You may preserve structures that you thought beforehand you would have to sacrifice. You may have to remove structures you thought beforehand might be preserved. The operator exercises and takes into consideration his individual experience in determining at the time of the operation what is the best thing to do. By selecting this route you are not doing blind surgery.

A great objection to the vaginal route is that it is more difficult. That mode of procedure in surgery should be adopted which is the most simple, which is the easiest to perform, and by which the largest number of men can acquire the necessary skill. Operations by the vaginal route are done between the two sewers of the body. Asepsis is more difficult; the dangers of wounding the bladder and bowel far surpass any trouble that can come from ventral hernia when the abdominal incision is properly closed. Furthermore, when we come to get the reports about the cases, in a large number of them where the vaginal incision was undertaken the results were unsatisfactory. You will find a large number of operators who have selected the vaginal route, and before they quit have had to open the abdomen from above in order to complete the operation. The securing of vessels in order to prevent hemorrhage is not so satisfactory, while in the suprapubic route you have the vessels before you. With the patient in the Trendelenburg position you have them under your eye, and with the aid of electric light you can see the vessels themselves very plainly. You can tie your ligatures safely and securely. In other words, you complete an

intelligent piece of surgery. I do not take the position that there is no field whatever for the vaginal route in pelvic inflammatory diseases; but I do say that with the increased experience of operators it will be narrowed very much. It has a field, but it is narrow, and in the comparison of the two methods we must apply sound surgical principles and common sense.

DR. J. G. CARPENTER, Stanford: We must be conservative in surgery. Here we have the contention of two operative procedures. The question is, which is the best for the patient, which is the best for the operator, and what pathological conditions are best suited for each operation. We find that the French are more expert in the vaginal method, the English and Americans in the abdominal, because they have respectively studied these different operations. In vaginal hysterectomy it is an unfinished operation. You are never certain of the pathological conditions above. It is true that you can remove inflammatory conditions of the tubes and ovaries. It is true that you can evacuate an abscess low down and pointing into the vagina. It is true that you can remove a myoma of five inches in diameter. It is also true that you can remove either an inflammatory or septic uterus, also a cancerous uterus, but is it the best method for the patient? While we may remove these conditions, we can not possibly determine the state of affairs above. What are they? You may have intestinal adhesions with an inclosed abscess; you may have an omental abscess; you may have a diseased tube, a tumor of the ovary adherent to the cecum, and all inclosed in multiple abscesses. I do not believe that you can deal intravaginally with these conditions as readily as you can by the abdominal route; nor can you deal with the various rents, with the perforations of the intestines, and the diseased conditions of other organs. You may find a dermoid cyst there, or a malignant growth. You may find an extra-uterine pregnancy to be dealt with, and you can not deal with it as successfully by the vagina as by the suprapubic method. There is danger too of wounding the bladder, the ureter, rectum, and sigmoid by the vaginal route. This you do not encounter in resorting to the suprapubic method. Again, there may be disease of the appendix; the patient may have been subject to recurrent appendicitis, the appendix might have become perforated and encysted. The abscess may be united to the uterus, the bladder, or the ovary itself. With that condition you could not deal with it as successfully by the vaginal as by the suprapubic route. Furthermore, the vaginal route is more apt to

become contaminated from bladder and bowel discharges. Of all cavities the hardest to render aseptic is doubtless the vagina.

As to hernia: When the abdominal incision is properly closed, there is no more risk from hernia above than below. The operation of suprapubic vaginal hysterectomy is no more serious. It is a more complete operation than the lower route. The intravaginal hysterectomists may remove conditions in the pelvis, but totally be unable to know what is above. We may remove the diseased conditions within the pelvis, but not the abdominal pathological condition.

Then as to the rest of the patient: You have no right to put your patient on her feet and send her around walking or out riding in ten days or two weeks. She should have a period of rest, the weight taken from the wound, so that the cicatrix will go on contracting, becoming smaller and smaller, so that the exudate will become absorbed. From a rest of three weeks, a month, or six weeks, the patient will be in a better condition to travel the journey of life than if she gets on her feet in ten days. Then, removing the diseased condition by the vagina does not cure our patient. It may anatomically, but it does not do it symptomatically, for it takes months, yea, a year or more, to get the patient out of the abnormal nervous condition brought on by the local inflammatory conditions within the pelvis.

DR. W. C. DUGAN, Louisville: In regard to the question of when shall we operate, I would say if there is much fixation the abdominal route should be the one selected. As has been well said, we can not see from below where the adhesions are; and, not being able to determine this, it is impossible to deal with them intelligently. It is out of the question, and we are working in the dark. Dr. Cartledge has well said that oftentimes we are forced to leave tubes and ovaries because they are adherent. The operation is not complete, and we simply hope that the patient will get along with the diseased tubes that we were unable to remove, or we have got to subject them to a secondary operation, or else, as has been advised by Lanphear, of St. Louis, do the combined operation at once, and, as mentioned by Dr. Wathen, opening up from below we find complications that we can not deal with, and we therefore open above in order to complete the operation.

In regard to pus tubes that we hear so much about: We know that if this pus should rupture into the peritoneal cavity the danger is almost nil. I do not wish to be understood as advocating rupturing of the tubes, but I do want to be understood as stating that pus in the

majority of cases in these tubes is harmless. I would say that ninety per cent of pus in pus tubes in these chronic cases is harmless. I mean gonorrheal cases, and not in the cases that follow absorptions or puerperal sepsis, for the pus in these cases is like that encountered in appendicitis, it is very virulent indeed. In regard to the time when patients should get up, I was glad to hear Dr. Frank bring out that point. Vaginal hysterectomists claim that the patient is able to get up in a few days. If a patient is going to be subjected to such a serious operation as removal of the ovaries and tubes, four or five days amount to nothing. They do best by remaining in bed, as Frank and Carpenter have said, for two or three weeks; and if they do this, we will have fewer cases of infiltration into the broad ligaments than we have to-day, as we are operating now, anxious to report that our cases got up at the end of four or six or ten days. Time is not such an important factor in these cases, and we should not use it as an argument.

With reference to accidents occurring from the use of clamps during these operations: Accidents do occur from the slipping or breaking of clamps. If we have a clamp high up, and it slips or breaks after having cut off the uterus, we have a complication which makes the perspiration pour out of us, and makes us very anxious until we have secured the bleeding vessels.

I was glad to hear Dr. Carpenter speak of mistakes in diagnosis. We must confess that we occasionally make mistakes. I have made some myself. I remember one case in which I was very certain that it was one of recurrent appendicitis. I operated and found it to be a pus tube. In another case I expected to find a pus tube, and it proved to be a prolapsed appendix attached to the uterus. We encounter these cases occasionally.

DR. WM. H. WATHEN, Louisville: Two years ago I was as much opposed to vaginal hysterectomy as any man who is opposed to it in this discussion, and the same arguments for both methods were then made by me. At that time I had more experience in abdominal than vaginal work. There was more determined opposition against this operation when popularized by Pean in his own city than we have heard here to-day. Segond, Richelot, Pozzi, etc., were all violent in their opposition to this operation; and with the arguments that you have heard to-day these men time and again, in the medical societies of Paris and in the foreign medical press, opposed it, but have since adopted it. To-day these men, after having watched the work of Pean,

have referred cases to him that could not be cured by laparotomy, and finding that he made at least symptomatically a perfect cure they gradually became converts, and to-day most of them are as enthusiastic or have been more so than Dr. Pean himself. The objections that have been urged to-day will not be urged by the same men if they will do this work continuously for a sufficient length of time to become thoroughly familiar with all the benefits of it. I have recently seen Second operate on a number of cases for bilateral pus tubes, and, instead of completing the operation in five minutes, he completed none of the operations in less than thirty minutes. He is slow and very painstaking, and as I remarked in my paper, there is no trouble in nearly all of these cases in enucleating pus tubes from below as well as from above if you adopt the correct technique. After you bisect the uterus, which can be done without trouble and without danger of wounding vital structures, you can pull out half of the uterus, pulling out the ovaries and tubes, and the adhesions are largely exposed, and with the fingers above you can reach the points of cleavage and enucleate with less danger to intestinal structures than you can above. At least that is the experience of the best vaginal hysterectomists.

In conclusion, let me say that I expect to see the gentlemen who have been so determined in their opposition to vaginal hysterectomy within the next two years earnestly advocating it in preference to the abdominal method. They will not claim that the uterus is a useless organ and ought to be removed. This is not correct, for the operation of total hysterectomy from above for bilateral pus tubes has for years been performed in this country, notably by Polk, Boldt, Baldy, Pryor, etc., every one of whom stand at the very top as abdominal operators.

DR. A. M. CARTLEDGE, Louisville: I expect to see the vaginal hysterectomists retreating from their position within a very short time. Of course we will have to wait until they have had more experience, but I do believe that the pendulum will swing in the other direction. It becomes a question of personal equation largely. I grant that a great many men do better vaginal than abdominal work, and that there are others who do better abdominal than vaginal work. Therefore to a certain extent the question is one of personal equation. Some are much more expert in removing these diseased organs by the vagina than in attacking them through the abdomen. Sometimes men who have done very little surgery are very successful and do good work. One of the nicest circumcisions I ever saw was done by a man who had not per-

formed a half dozen of these operations in his life, but he has a special adaptation for it. But, as I have previously remarked, it is a matter of personal equation, and we must wait until the question is decided, and make our decision from the evidence placed before us. .

I want to say a word or two in regard to the length of time that patients should remain in bed after being subjected to either abdominal section or vaginal hysterectomy. I think it is suicidal to let a woman get out of bed on the tenth day, either after a vaginal hysterectomy or abdominal section. Every one knows very well that so far as pain and fever are concerned these patients do nicely in the course of six or eight weeks, but when patients are allowed to get up and go about at the end of eight or ten days the tension upon the sutures is very great. We hear men talk about never seeing pus in their wounds, and that the wounds are perfectly cicatrized at the end of six days. I have done a little surgery myself, and I must confess that I do not see these things. I do not see wounds that are firm enough to stand strain in six or seven days, even in small wounds. The question of allowing patients to get up is simply not to be considered. Fecal and urinary fistulæ are much more common in the vaginal operation than in the abdominal. Surgery done by the vagina is more or less incomplete, in view of the claims made for it. If we consider the magnificent statistics of operations through the abdomen, the question is still certainly not to be settled in favor of vaginal hysterectomy.

DR. LOUIS FRANK, Louisville: I do not believe any of the gentlemen who have read papers or who have spoken here are opposed to vaginal hysterectomy. I believe Dr. Wathen has gotten a wrong idea. We are not opposed to it at all, but we are opposed to the indiscriminate use of it in all cases. We still believe in and make an appeal for the abdominal method, and maintain that not all cases should fall under the domain of vaginal hysterectomy. This class of cases mentioned by Dr. Wathen might be far better treated from above, particularly cases of fibroid tumors, but not those cases that involve the entire uterus; also cases of subperitoneal fibroids. In many instances there is no necessity for removing the uterus. If we operate from below we do not know what we have. We operate blindly. It is absolutely impossible to diagnosticate accurately the condition that exists in the pelvis until we get in there. If we go in from below we do not know what is there until we open the abdomen and inspect it. It is just in this class of cases that we are told the vaginal operation is best suited.

These are just the class of cases that are the most dangerous, if complete, perfect surgery is done for the woman. There are cases in which we will have complications, such as fistulæ; there is apt to be rupture and discharge into the intestines, rectum, or bladder. All of these things may occur in that class of cases where there is a densely infiltrated pelvis.

As to pus entering the abdominal cavity after rupture of an abscess, this point has been dwelt upon at great length by vaginal hysterectomists, saying that there is great danger of soiling the peritoneum by the pus. A few days ago I operated upon a case of gonorrheal salpingitis, and a large quantity of pus escaped into the abdominal cavity. It was sponged out, the incision closed, and the patient made a perfect recovery. Occasionally we will encounter cases of this kind, but the pus is not so virulent in its character as that following puerperal and other septic troubles. The pathology of the condition is different, and, no matter how extended the area of inflammation, we can deal with these cases much more easily from above than from below. The adhesions are easier to separate. The puerperal cases are dangerous where there is rupture, and are just as dangerous in many instances if ruptured from below, and the wound closed up and not drained.

[TO BE CONTINUED.]

CURE OF SARCOMA IN ALGERIA BY NATIVE DOCTORS. — Legrain describes several cases of sarcoma which he had removed and examined histologically. These had been treated by native doctors, who applied a tar obtained from certain bushes in the Sahara district, among them juniper. In each case the sarcoma was entirely and permanently cured. The question arises whether the supposed sarcoma may not have been a tuberculous affection, as tar is especially efficacious in them, while it has no effect on sarcoma, and it is not always easy to distinguish a sarcomatous from a tuberculous tumor. Legrain adds that epitheliomata are unknown in Algeria except as they appear on a European. This may possibly be due to the vegetarian diet without meat, and absolutely without pork. Verneuil and Reclus asserted long ago that the herbivorous animals were much less liable to cancer than the carnivora, and they ascribe the six-fold increase in the number of cancers at their hospital during the last forty years, to the increased consumption of meat by the laboring classes.—*Bulletin de l'Académie de Méd.*

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÆ."

Vol. 22.

SATURDAY, SEPTEMBER 5, 1896.

No. 5.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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LUSTGARTEN'S BACILLUS AGAIN.

The Journal of the American Medical Association (Sept. 5, 1896,) has the following very interesting article in a line of original research perhaps not studied with sufficient care by bacteriologists. We quote it in full:

THE BACILLUS OF PARESIS.—That paretic dementia, or, as it is more commonly designated, paresis, has in the vast majority of cases syphilis as its antecedent, is coming to be a generally accepted fact. The exact relation of the two disorders to each other are, however, still in question, and the syphilitic or parasyphilitic nature of paresis is maintained by some and as strongly disputed by others. If the infection of syphilis were as definitely known as is that of some other diseases, tuberculosis for example, the question would be more simple; we could search for the specific microbe, and if found the identity would be established. Other like questions have been settled in this way; the failure to find Hansen's bacillus in syringomyelia has been considered as conclusive against Zambaco's theory of its identity with leprosy, and still other instances could probably be cited. With the present uncertainty as to what is the real nature of the syphilitic infection, there is no possibility of a definite conclusion as to the identity of it and that of paresis on purely bacteriologic grounds.

In the latest issue of the *Annali di Neurologia* Dr. Piccinino, one of Professor Bianchi's assistants, reports the results of a bacteriologic study of paresis in the laboratory of the Instituto Psichiatrico of the University of

Naples. He examined the cortex in five cases, some of them with clearly syphilitic histories, others with it suspected or denied, using all antiseptic precautions, and taking the specimens through openings made in the skull by trephining before the removal of the calvarium as an additional security. Culture experiments and the usual staining methods gave only indeterminate or negative results; nothing very characteristic or noteworthy was discovered. The use, on the other hand, of a staining method only slightly modified from that of Lustgarten for his syphilis bacillus revealed a great abundance in all the tissues, and especially in the pericellular spaces, of a form apparently not very different from that described by the above author. The same method was tested as a control experiment in other brains than those of paretics, but with a uniformly negative result, and it was only by this staining reaction that these bacilli could be detected in the parietic cortex.

This paper has a special importance, in view of the question of the parasymphilitic nature of parietic dementia, and reflexly, as it were, also on that of the value of Lustgarten's discovery. It is a little remarkable that the research had not been made before. Had there been more faith in Lustgarten's bacillus as the cause of syphilis, or had the notion that paresis is only a late manifestation of that disease been earlier accepted by physicians, the very obvious suggestion of this special investigation would undoubtedly have been sooner taken up. It will be in order now to repeat Piccinino's observations and to prove their value by widespread and careful investigations by our asylum pathologists.

Of course this discovery brings up again the old controversy as to the etiological relationship of the bacillus of Lustgarten to syphilis, which seems to have lain dormant for nearly a decade. Lustgarten and his followers found a bacillus in various syphilitic lesions; but the impossibility of differentiating it by any known method of staining from the pathogenic bacilli of leprosy and tuberculosis and the saprophytic bacillus of smegma put the discovery at a discount and threw the whole question into confusion.

Sternberg,* referring to the researches of Alvarez and Tavel and Matteredstock, who found that in smegma from the prepuce or vulva bacilli which have the same staining reaction and are similar in their morphology to the bacillus of Lustgarten, says:

"This by no means proves that the smegma bacilli found under the prepuce of healthy persons are identical with the bacilli found by Lustgarten and others in sections of tissue involved in syphilomata. In the absence of pure culture and inoculation experiments it is impossible to establish identity, however similar may be the characters referred to.

*A Text-book of Bacteriology, Wm. Wood & Co., 1896.

Several well-known pathogenic bacilli resemble quite as closely in these particulars other bacilli which have, nevertheless, been differentiated from them by culture and inoculation experiments. . . . On the other hand, since it has been shown that similar bacilli are common in preputial smegma, we can not attach great importance to the finding of Lustgarten's bacillus in primary syphilitic sores. . . . Baumgarten, who has searched in vain for Lustgarten's bacillus in uncomplicated visceral syphilomata, suggests that the bacilli found occasionally in such lesions were perhaps tubercle bacilli and represented a mixed infection."

And so the pathologist struggles in vain with a tangled skein represented by the etiology of syphilis, leprosy, and tuberculosis. Before the days of bacteriology these diseases were thought by some to be pathologically akin if not identical, and now such researches as the above indeed point to kinship.

But, coming back to the main issue, paresis, there are the best of reasons, as all neurologists admit, for regarding paretic dementia as a remote manifestation of syphilis, and if its lesions can be made to show the same microbe which characterizes the primary syphilitic lesion a great advance in etiology is scored.

The methods of differential staining after all distinguish only families or genera of microbes, not species. In the cases noted the tubercle species could be excluded by the culture test, the leprosy species by geographical situation and previous clinical history, while the smegma species might be excluded by the nature of its habitat, unless it could be proved that it can migrate at will throughout the body.

The studies of Piccinino seem to throw some light into the darkness, and we may expect more in the near future.

Notes and Queries.

PREVENTION OF CHOLERA IN EGYPT.—The latest dispatches announce that cholera has now been carried to the Ambigole Wells and Akasheh, and has carried off many victims among the advance troops at the front. The army regulations for the prevention of cholera are undergoing revision to bring them up to the date of our present knowledge, since their inadequacy was publicly dwelt upon by Mr. Ernest Hart in India. They lay for too little stress upon the water and food supplies as main sources of infection and epidemic diffusion. There is, however, reason to hope that the practice of the medical officers of the expedition will be in advance of the regulations. The recent experience in India and the results achieved by Professor Hankin in the disinfection of wells will, it may be hoped, be utilized in India, and that primary importance will be attached to the safeguarding of the potable water. The Ashanti expedition was provided somewhat hurriedly with the Pasteur filters. We fear that the Egyptian troops are deficient in any other means than that of boiling or the use of permanganate; but, whatever means may be employed, it must be remembered that change of station and encampment without precautions of the above character have been shown in India to be inadequate to check the diffusion of cholera.—*British Medical Journal*.

INSANITY AND MARRIAGE.—During the second reading at Berlin of the Bill for the Codification of Civil Law, an amendment, supported by the Center and most of the Conservatives, making incurable mental disease not a legal cause of separation between husband and wife, was accepted by a majority of the Reichstag. The decision, according to the Berlin correspondent of the Daily Chronicle, which has been almost universally condemned throughout the country, was reversed on July 1st on third reading by a narrow majority, and the original proposal of the Government, that incurable mental illness shall be a lawful ground of separation, remains the law of the land.—*Ibid*.

INTRA-UTERINE INFECTION OF SYPHILIS.—Dr. Abner Port in an able paper on this subject (*Boston Medical and Surgical Journal*, July 23, 1896,) arrived at the following conclusions:

It seems to me that such a statement as the following expresses our knowledge and its limitations, and might be accepted by all the authors whose statements I have quoted.

1. It is universally admitted that there is normally no direct communication between the maternal and fetal blood.

2. There is proof, however, that certain contagious diseases are conveyed to the fetus in utero.
3. In some of these cases it is shown that hemorrhages have destroyed the original structure of the placenta and opened a path of communication.
4. It is then no longer possible to say that intra-uterine infection is impossible in syphilis.
5. Clinical observation shows that intra-uterine infection does take place in syphilis.
6. Whether such infection is invariable or what its limitations are we do not know.

POST-TYPHOID BONE LESIONS.—H. C. Parsons (Johns Hopkins Hospital Reports, vol. v,) records 6 cases, in 5 of which a bacteriological examination was possible. In 1 Eberth's bacillus was associated with the staphylococcus pyogenes citreus, and in the remaining 4 it was found as a pure culture. In 1 case a post-typhoid node appeared and subsided twice without suppuration. The lesion is more frequent in men and is not influenced by age. It appears from one to sixteen months after the fever, and from an examination of literature the author found but one case forthcoming in which it had occurred during the fever. Any bone may be affected, but the tibia is most often involved, while the hands and feet are especially free. The ribs and costal cartilages are often affected. The typhoid spine is probably neurotic and not, as has been thought, due to organic change. Pain is the first symptom, and is usually localized to the seat of subsequent necrosis; in character it resembles that of secondary syphilis. Swelling follows. Resolution without necrosis may occur, or, on the other hand, there may be exacerbations and recurrences. Fever is absent, and the clinical course is very chronic. Trauma may, by lowering the vitality of the bone marrow in which typhoid bacilli can remain latent, be a causal factor, but a history of injury is often absent. Keen has shown that overstrain or muscular exertion may give rise to necrosis of bone after typhoid fever. Sinuses left after opening abscesses may remain open for long periods and the discharge be quite free from any micro-organism except the typhoid bacillus. The most satisfactory treatment is complete removal of all the diseased tissues. The prognosis is good.—*British Medical Journal*.

TREATMENT OF OZENA.—Cozzolino (*Gazz. degli Ospedali*, May 23, 1896), in a clinical lecture on this subject, speaks strongly against the supposed cures of ozena by means of serotherapy (that is, by the use of antidiaphtheritic serum). He believes that the part played by microbes in this disease as distinguished from pseudo ozena is much less than certain writers would have us believe. On the other hand, the condition of the nasal mucous membrane is all-important, and the author's treatment is directed toward this, and not to any microbic agency. If the soil is healthy, microbes do no harm. The only radical treatment, in the author's

opinion, is surgical, and should be directed toward the production of a "sclerogenous" condition; that is, the diseased parts should be freely scraped and scarified, as one would treat a lupus, so as to produce a healthy scar surface.—*Ibid.*

PRURITUS ANI.—Dr. Charles G. Cumston says that patients suffering from pruritus ani are usually either arthritic or nervous. For local application the following are recommended:

R	Menthol,	4.0
	Alcolis,	30.0
	Aq. dest.,	60.0
	Acid. acetic, dil.,	150.0

Misce. S: For external use only.

R	Acid, carbolic,	5.0
	Kalii hydrat.,	2.0
	Ol. lini sem.,	30.0
	Ol. bergamot,	9.5

Misce. S: Apply at bedtime.

In very severe cases deep cauterization of the parts with nitrate of silver or the thermo-cautery had been employed. Section of the nerves gave good results in pruritus of the anus, vulva, and scrotum when the affection was very intense.—*Am. Gyn. and Ped.*

FETID SENILE ENDOMETRITIS.—Maurange (*Gaz. Méd. de Paris*, May 9, 1896,) has observed this condition four times within six years. The last patient was sixty-two. The menopause was complete at forty-seven. For six months an intensely fetid discharge occurred at irregular intervals, preceded by hypogastric and lumbar pains. Cachexia and debility set in. The discharge was purulent. The vagina was very much inflamed, deep red, and granular. The uterus was tender, its cavity $3\frac{1}{4}$ inches long, and its cervix edematous but not fixed. The cervix was dilated, the endometrium disinfected with creosote in glycerine, then a tampon of iodoform gauze was passed into the uterine cavity and vagina. After a few such dressings the patient was restored to perfect local and general health. In other cases hemorrhage has been observed, so that all the clinical symptoms of cancer may be present.—*British Medical Journal.*

THYROIDS IN CATALEPSY.—After giving detailed histories of cases treated by thyroid medication, Dr. Joseph G. Rogers makes the following deductions: (1) That in conditions marked by inhibition of sensory, motor, and mental activity, without gross organic lesion, such as obtain in katatonia and in certain types of stuporous insanity and melancholia, we may expect benefit from thyroid medication, judiciously used. (2) That the effects of thyroids in full dose bear a striking resemblance to many of the symptoms

Special Notices.

ALMOST A SPECIFIC FOR RHEUMATISM.—When it is considered how universal a disease is rheumatism in its various manifestations, and how long it has existed as one of the plagues of mankind, it is remarkable that there should be only so small a list of really efficient remedies at the command of the physician. The salicylates at one time were thought to approach more closely than any thing else to being specifics for rheumatism, and their introduction into therapeutics was certainly a great advance on previous forms of medication. But the fact remains that their use is not infrequently fraught with disappointment. Some authors have gone so far as to claim that they sometimes do more mischief than the disease itself, on account of their weakening effect on the heart and nervous system. Be this as it may, their use is quite often followed by prolonged impairment of the digestive functions in consequence of their irritating effects on the gastric mucous membrane. Renal irritation has also been observed. All these disadvantages of the salicylates are obviated in a derivative of salicylic acid, known as Salophen, which, while possessed of marked antirheumatic power, is perfectly innocuous. Owing to the fact that this drug is not decomposed until it reaches the intestinal canal, it will not disturb the gastric functions, which is a point alone of the utmost importance. An editorial writer in the *Daily Lancet*, June 23d, gives his estimate of the remedy in the following emphatic words:

"Experience has taught us that in Salophen we have this long-wished for remedy. We have used this drug in many cases with patients who had passed through several previous attacks of six weeks' duration, and in almost every instance the violence of the disease was under control in less than one week, while convalescence was rapid, and there was no functional derangement.

"Actual experience convinces us that in Salophen we have almost a specific remedy for rheumatism. So satisfactory have been our own results that we can confidently commend its use, and we would be glad to have our readers report their results with this drug."

NERVOUS PROSTRATION.—My son, aged twelve, had been growing nervous over the shock of his brother's death, and seemed to derive no benefit from any remedies used in his case. Had him to the sea-shore, change of surroundings and every thing that could be done for his benefit, he still grew thinner and worse all the time. I put him on Celerina, and had marked benefit before the first bottle was used, and he has almost entirely gotten over it with the help of another bottle I got for him. I consider it a very nice and efficient nervine, just the thing for the children and nervous and delicate persons, where there is great prostration. I shall use it freely.

MOOSIC, PA.

N. P. FRASSONI, M. D.,

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THE AMERICAN PRACTITIONER AND NEWS

"*NEC TENUI PENNĀ.*"

VOL. XXII. LOUISVILLE, KY., SEPTEMBER 19, 1896.

No. 6.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

A CASE OF PLACENTA PREVIA.*

BY ARCH DIXON, M. D.

On the 23d day of February, 1895, I was called hurriedly at 4 A. M. to see Mrs. D., who informed me that she had had a profuse uterine hemorrhage and was still bleeding. She was pale and blanched, respiration sighing, and pulse 120. She stated that she was about six months gone in pregnancy and greatly feared a miscarriage.

On examination the os was found slightly dilated and soft and patulous on the left side, thick and boggy on the right, the dilatation was sufficient to admit the index finger. The membranes were intact. On the right the lower border of the placenta, extending partially over the mouth, could be easily distinguished. There was still some bleeding, a tampon was placed at once and stimulants given—strychnia, atropia—hypodermically.

Counting from the last period Mrs. D. was in the twenty-ninth week of her pregnancy. During the first three months, while in Owensboro, she had had a slight hemorrhage which readily yielded to treatment. Six weeks later there was a recurrence of the bleeding, which again abated under rest in bed and the ordinary treatment for threatened miscarriage. No vaginal examination was made. Recovery was prompt, and she seemed in a fair way to go to her full term. She was feeling

* Read at the June meeting of the Kentucky State Medical Society, 1896. For discussion see p. 213.

well and looking well when she retired on the night of the 22d of February. Her slumber was not disturbed until she was suddenly roused by a gush of blood at four o'clock on the morning of the 23d.

I shall not go into any discussion as regards the treatment of placenta previa or the advisability of temporizing in such cases. I believe that as soon as the diagnosis is established the induction of premature labor becomes obligatory. I therefore made immediate preparation for delivery.

Slight pains came on in about half an hour after placing the tampon, which gradually increased in strength. At the end of four hours the tampon was removed.

On examination the os was found dilated to about the size of a half a dollar, the cervix was soft and could be easily dilated by the finger, the placenta was separated as far as the finger would reach. The fetus was presenting by the shoulder. I attempted to bring the head into position, but was unable to accomplish it, owing to uterine contractions which were now strong.

After a few inhalations of chloroform the membranes were ruptured and two fingers were passed into the uterus, bringing down the feet; the aftercoming head was delivered with short forceps. The placenta was delivered without difficulty, a full dose of ergot was administered hypodermically, together with a stimulant—whisky—given by the mouth. The mother soon rallied and in a short time was fairly comfortable.

And now comes the interesting part of this paper. To my surprise the fetus was living, though somewhat asphyxiated. It was eleven inches long and weighed a fraction over two pounds. The nurse, Mrs. Ella G. Davis, took charge of it, swathed it in flannel and surrounded it with hot water bottles. When circulation was well established she in lieu of an incubator placed it in a wool bag which was kept upon hot water bags for about two months. It was fed by means of a dropper on Lacto-Preparata for four or five days, when this was changed to milk drawn from the mother's breast.

The baby thrived and grew from the start, and in a short time was able to get its nourishment in the usual way. I show you a picture taken when it was four months old, its weight was then eight and a half pounds. She is to-day one of the prettiest babies in the State, and to her nurse, Mrs. Davis, is due the fact that she lived, for I had expressed the opinion that for her life was almost an impossibility.

HENDERSON, Ky.

RESUSCITATION OF STILL-BORN CHILDREN.

BY T. B. GREENLEY, M. D.

When we examine the statistics of still-born children we are somewhat astonished at the great number of lives lost annually from this cause alone. If we take our own metropolis, containing about two hundred thousand population as an example, we find there is nearly an average of twenty-five still-births monthly, amounting to three hundred lost lives annually in that city. If that ratio is applied to the population of the State, containing over two million, we have the astonishing number of three thousand lost children annually from the same cause.

The question naturally arises, is there any help for such a great loss of human life? Is there no means that can be instituted by which we can save many of these little ones? The writer has been long since impressed with the conviction that a majority of these asphyxiated little germs of humanity might be saved by the use of certain means properly manipulated. He has been engaged in the practice of medicine over fifty years, and can not call to mind more than three or four cases of still-births, aside from those which had to be eviscerated before delivery, but what he succeeded in revivifying; two of these were cases of placenta previa where the children were exsanguined before delivery. One lost was the largest child I ever saw, weighing within a fraction of sixteen pounds, and the product of the first conception; the labor being greatly protracted. The other was a case of prolapsus of the cord in a primipara, the child being lost before I saw the case.

The means I have used by which I have been so fortunate in saving life are very simple and easily practiced, and the only secret of my success, I am induced to believe, consists in their patient and protracted use.

When called to a case of labor, especially if it is protracted, I always have ready warm water and a vessel large enough in which to place the infant, and, if born moribund, I immediately sprinkle, first, cold water in its face a few times, and if this does not excite reflex action so as to produce respiration, I then place it in the vessel of warm water, say of

ceeding, and the only secret consists in protracting the manipulation sufficiently long.

Many children born asphyxiated will respond to the simple act of sprinkling cold water in their faces as soon as delivered, while others require artificial respiration a longer or shorter time. In a few cases I have had to protract the manipulations for nearly half an hour before I succeeded in producing respiration.

There are several modes of artificial breathing, all of which are simple and easily practiced. The one I have usually observed is to take both hands of the infant in my right hand and carry them at arms' length up and down over its head every two or three seconds, while I hold its head up out of the water with my left hand.

Another mode of artificial respiration is to place the thumbs of both hands in the axillæ of the infant and, with the hands extended on the chest, use compression and relaxation some fifteen or twenty times a minute, at the same time holding your mouth to that of the child, blowing your breath in its mouth immediately after each compression of the chest, that is during relaxation. This process should be kept up some considerable length of time.

It is possible that in some instances the tongue of the child may be so retracted as to prevent free passage of air into the glottis. In cases of this kind it is recommended that a pair of forceps or the finger and thumb be used to draw the organ forward and push it backward at each contraction or relaxation of the chest. In order to conveniently accomplish this procedure, a pair of wooden forceps has been invented; the name of the author I have forgotten.

As a rule, if the child has been asphyxiated but a short time the sprinkling of cold water in its face immediately after birth will in a short time effect resuscitation.

It is always advisable to notice whether there is a collection of mucus in the child's mouth or about the glottis, and to remove it with a mop or feather. It is claimed that Dr. Max Schultze's swinging method often succeeds in effecting resuscitation when other measures fail. I have never put it in practice. I have thought that the principal reason why so many still-born children are lost is due mainly to the want of time on the part of the busy practitioners to use the necessary manipulations to effect restoration on the one hand, and to ignorant midwives on the other.

In attending a case of labor our main object should be to save the

offspring. There is nothing that offers more joy to the mother in this life than placing her first-born child in her arms. You might say it is to her the *ne plus ultra* of all happiness. Then, when it affords the mother such great joy to receive her first-born, this should act as an incentive to induce us to exert our best efforts to effect resuscitation, as it is in first labors we usually have still-born children.

I was greatly gratified at the result of a case of labor a few months since. The lady had been in bad health for some months previous to her confinement, and was really sick with an attack of remittent fever when labor came on at the end of seven months. Owing to her premature confinement I had but little hope of saving the child. It was still-born, and the cold water douche in the face failed to excite reflex action of the pneumo-gastric nerve. I now resorted to artificial respiration, as above described, having the child in warm water. This I kept up for nearly half an hour, and finally was gratified with success in producing respiration. The child weighed two and one half pounds. It is now a stout, hearty little fellow. Nothing should afford us a greater source of gratification than the saving of a life..

MEADOW LAWN, KY.

CHOLELITHIASIS.*

BY C. B. SCHOOLFIELD.

The predisposing causes of biliary lithiasis are invalidism, child-bearing, and abdominal tumors. According to Webster, of Chicago, thirty-six per cent of insane of both sexes—twenty-five per cent of females and ten per cent of males—have gall-stones. Naunyn states that only about one per cent of those who have gall-stones show symptoms of their presence. Hospital statistics, however, show a much larger percentage than would be found in general practice, owing to the invalid classes in these institutions.

Etiology. Gall-stones are formed in the gall-bladder and hepatic duct; although they are found in the cystic duct and ductus communis choledocus, it is not probable that they are ever formed at either of these

Pathogenic organisms, especially the bacilli coli communis, may find their way through the ducts and cause catarrh of the gall-bladder, which in connection with a sluggish flow of the bile favors the formation of calculi. Their number may be one, or thousands. As many as seven thousand have been found in one gall-bladder. They are a dark brown or chocolate color. If single, they are round or oval; when there are numbers of them they are cubic or square shaped, with facets caused from pressure.

Diagnosis. The first intimation of gall-stones usually is an attack of biliary colic. The pain is of a lancinating, tearing, or grinding character, and located over the right hypochondriac and epigastric regions, in the back and under the right shoulder blade. Gastric symptoms are most usually prominent, with vomiting, nausea, and headache. Any thing taken into the stomach, food or drink, causes pain, which comes on generally when the contents of the stomach are passing into the duodenum. Jaundice occurs only in about fifty per cent of the cases. Its absence is probably due to large calculi that can not engage in or pass through the ducts. If the cystic or common duct becomes impacted with a stone, the pain is excessive; the patient becomes icteric, and a tumor is formed by the distension of the gall-bladder. The feces should be diluted and passed through a sieve or strainer in search of calculi. Their presence, of course, is pathognomonic of "lithiasis biliaris."

One of the most difficult things to differentiate from a gall-bladder tumor is a movable kidney; its shape, position, and the character of the pain are so similar that it is easy to be mistaken in the matter. This is especially true when there is jaundice, as occurred in a case under my care from pressure on the bile ducts. The kidney is more movable, and by careful manipulation the fingers can be inserted between the edge of the kidney and the liver, which can not be done with the gall-bladder. The latter tumor can be traced up under the liver, and is less movable than the kidney. The pain in renal colic follows the course of the ureter toward the bladder; blood in the urine and the passage of a cystic calculus are points of differentiation. The occupation of the patient and the blue line on the gums are the diagnostic points in lead colic.

Treatment. The medical treatment of gall-stone disease consists in giving remedies to increase the rapidity of the bile flow, to prevent the formation of calculi and encourage their passage through the ducts.

Soda salicylate, soda phosphate, and the free use of the lithia waters, a course at some of the mineral springs, such as the Carlsbad, Vichy, Buffalo Lithia, or the French Lick Springs, is usually recommended.

The above is a brief outline of the usual routine treatment of cholelithiasis.

We are not always able to elect in the treatment of cases as they come to us, opposition of the family or the patient to operative interference compels us to do the next best thing. Much has been said in favor of each and all of the above remedies. Personally I have seen no decided results from any of them.

Surgical Treatment. When gall-stone disease is established beyond a reasonable doubt, it is no longer a medical disease unless there are stones passing with the feces followed by amelioration of symptoms. When we have a distended gall-bladder, with or without jaundice, accompanied with violent pain and other evidence of gall-stones, cholecystotomy should be recommended and insisted on for its relief. Before occlusion of the ducts, jaundice, and cholemia, cholecystotomy is one of the simplest and most successful operations known to abdominal surgery; but if delayed until those complications arise it becomes one of the most difficult as well as dangerous. With the latter conditions a biliary fistula should be established and the gall-bladder drained until the jaundice clears up, and then we should perform a secondary operation if necessary for the removal of stone from the ducts. The preparation of the patient is the same as that for other abdominal operations. The incisions may be vertical, as recommended by Tait, along the edge of the costal cartilages, or in the course of the external oblique muscle, as recommended by Greig Smith. For removal of calculi from the cystic or common ducts a combined incision may be made to give working space. If there are no signs of occlusion it is best to stitch the gall-bladder to the abdominal incision before opening it. The method I have used in doing this is to insert two silk-worm gut ligatures far enough apart to allow a sufficient opening in the bladder for extracting the stone, these ligatures to include the entire thickness of the abdominal walls, the serous and muscular coats of the gall-bladder. These two act as anchors and draw the organ up snugly into the wound. It is then stitched with fine silk or catgut closely to the fascia and peritoneum only. If the skin and muscular tissue are included, it forms a mucous lining to the fistula which interferes with closure and is liable to cause hernia. Opening the gall-bladder is not only necessary for

the removal of stones from its interior, but is an important part in the method of removing them from the cystic duct. When it becomes necessary to incise the ducts for the removal of calculi, the closing sutures should be inserted before the stone is removed. Unless this is done it becomes a very difficult procedure.

In simple, uncomplicated cholelithiasis, without occlusion of the ducts, the gall-bladder might be sutured after removal of the calculi and dropped back without any great risk, but I do not think it is good surgery to do so. In the first place, stitching the bladder to the walls renders it perfectly safe; secondly, the drainage thus secured cures the catarrh; thirdly, the position in which it is held prevents the accumulation of calculi in the future.

Cholecystenterostomy should be confined to complete obstruction of the common duct. The operation may be performed by the Winnewarter suture method or with the Murphy button. I venture to say that any one having seen the latter method will never resort to the suture. Cholecystectomy is an operation of necessity and not of choice. A small, friable gall-bladder that can not be brought up into the incision may require removal; it may be tied off or enucleated, and the parts drained. The statistics of recovery after cholecystotomy, as far as obtainable, are about ninety-five per cent when the ducts are not occluded. When there is obstruction with calculi the percentage is somewhat lower; but even with such conditions there is a very low mortality.

During the five years that I have been doing abdominal work, I have done but one cholecystotomy. The fistula closed on the thirteenth day and the patient was out in three weeks.

DAYTON, KY.

CONTRECOUP FRACTURE OF THE SKULL.*

BY F. M. GREENE, M. D.

Thinking that it may be of interest to the many readers of the *American Practitioner and News*, we relate the following case which occurred recently:

A young man, 26 years of age, was brought to the city hospital from the city

Arrived at 11 o'clock A. M., and found patient lying in the door of his cabin on the floor, his head resting upon a pillow and his feet upon the platform outside. His two attendants had been unable to restrain him in bed, and he made frequent efforts to get up. Noted the following symptoms, pulse beating 70, moderately full and irregular; respiration 16, easy and natural; temperature in the axilla subnormal, extremities cool. He appeared to be in a state of semi-consciousness, moving his limbs about freely, but would answer no questions even when shouted loudly in the ears.

On examination of head I found a contused wound of the scalp made by some dull instrument about four inches in length, and extending from the left parietal eminence forward and downward. He was with difficulty restrained by the attendants during the examination, which was made principally with the index finger rendered aseptic. He was ordered to be removed immediately to St. Joseph's Hospital, and while our attention was drawn away he was allowed to walk to a spring-wagon, between two assistants, a distance of fifteen to twenty paces. On arrival at the hospital the patient was etherized, when Dr. R. C. Falconer and myself made careful examination of his wound. There was no other wound or abrasion found upon his head. An incision was made through the lacerated tissues, exposing the periosteum, and we found no depression or evidence of fracture in the external table in the locality of wound. The wound was drawn together with four sutures, dressed antiseptically, and patient put to bed. Pulse now beating 70 and intermittent, pupils very much contracted, and there were no symptoms of partial or general paralysis. His urine was drawn off with a catheter.

We concurred in the opinion that the symptoms were those of concussion rather than compression of the brain, and an expectant plan of treatment was adopted. Twenty grains of calomel were placed far back upon the tongue, and a turpentine enema ordered to be given him at six o'clock P. M. If they found it difficult to restrain the patient, he was to have one fourth grain of morphia hypodermatically, to be repeated *pro re nata*. Notwithstanding the third dose of morphia he was restrained in bed during the night with much difficulty, and had finally to be confined by bands across his body.

August 15th, I saw him at 10 o'clock A. M. Patient resting easy; pulse 70; respiration 16; temperature subnormal. The pupil of right eye was now found dilated; the pupil of the left still contracted.

During the previous night the patient had vomited freely, and lower bowels moved copiously by enema, examination of body linen and bed showed that the bladder had evacuated its contents. His wound was not dressed, and twenty grains of calomel were again placed upon his tongue.

We learn from the attendants that he again passed a restless night notwithstanding the morphia had been repeated. Toward morning he became more quiet, symptoms of coma now set in, and he expired about nine o'clock on the third day. A careful autopsy was made at 1 o'clock P. M. by Dr. Falconer and myself, Dr. Barkley being present. The following conditions were now revealed in this case. On removing the upper part of cranium, no fracture or depression of bone in the vicinity of the wound could be discerned; a small clot was found under the arachnoid membrane on this side directly under the wound in the scalp. On the opposite side of the head and commencing at a point in the right parietal bone, directly opposite the point of injury, there was found an extensive fracture continuing downward and forward through squamous portion of temporal and greater wing of the sphenoid and probably to the base of skull.

One of the branches of the middle meningeal artery had been wounded, and there was extravasation of blood, causing a large clot, dissecting away the dura mater and pressing upon the brain. There was also extravasation externally under the temporal fascia and muscle, producing a small swelling which had only been observed a short time before death. The clot within the cranium was doubtless formed slowly, was very firm, and was removed with difficulty by the handle of the scalpel.

Both hemispheres of the brain were now incised longitudinally, and numerous dark points (small clots) were observed at various points, showing extravasation also in the brain substance. During the coroner's investigation it was brought out that the patient had bled from both the nose and mouth soon after the injury. There was no appearance of either when I first saw him. The case was treated expectantly throughout, the symptoms indicating concussion rather than compression.

Unconsciousness was at no time complete, the patient making frequent attempts to get out of bed, and on moving any of his limbs he would immediately replace them in their former position. Up to the evening of the second day no symptoms of paralysis had developed in

the case. The emesis during the previous night and discharge of both feces and urine led us to hope for reaction. The hemorrhage from a branch of the meningeal artery must have taken place slowly, thus preventing complete unconsciousness and paralysis earlier. The vibration given to the brain from the severity of the stroke was sufficient to have produced death independent of the extensive fracture.

We call attention to the great difficulty sometimes of differentiating concussion from compression of the brain. In this case the symptoms of the one gradually merged into those of the other. In compression we usually have complete unconsciousness, while all the special senses are suspended. We have partial or complete paralysis; respirations full and noisy, pulse full, slow, and sometimes irregular; stomach insensible to any or all impressions; no nausea, no vomiting; deglutition impossible; pupils variable but usually dilated; temperature natural or subnormal. In this case the special senses were greatly blunted but not entirely abolished; respiration quiet and feeble; power of moving extremities retained to within a short time of death. Emesis had occurred and urine and feces incontinently discharged; finally the symptoms deepened into coma which preceded death. The question of trephining did not enter the discussion as there were no symptoms demanding it.

In regard to injuries to the brain substance by strokes upon the head there are usually mentioned four varieties of cerebral vibratory concussion, any one of which may prove fatal: (1) Vibration without visible lesion; (2) vibration followed by sero-sanguinolent transudation; (3) vibration attended as in this case by extravasation of blood; (4) vibration with laceration of brain substance.

Fractures of the bones of the cranium by return-stroke, or, as the French have termed it, *contrecoup*, are not of very frequent occurrence.

Erichsen says this kind of fracture has been described by some surgeons as of frequent occurrence, while it has been denied by others. There can, however, be no reasonable doubt that it does happen, as in this case, but is perhaps less common than many suppose.

"For its occurrence several conditions are necessary, the skull must be struck over a large surface, as when one falls upon his head against the ground." Fractures *contrecoup* are doubtless most common at the base of the skull, and commonly radiated but never depressed.

Agnew thinks "the term *contrecoup* is used in such a vague sense that it should be discarded from the nomenclature of cranial injuries.

Strictly interpreted, it applies only to a fracture which takes place directly opposite to a point where a blow is applied to the head, an occurrence, I apprehend, which rarely happens unless the opposite point is a fixed or resistant one."

In this case it would not be properly fracture by contrecoup. In the case related above it was found that the patient had been hit on the side of the head with a heavy piece of oak plank more than one inch in thickness, and immediately after the injury was carried into the house. There was no other way in which it could have occurred.

In the Medical and Surgical History of the Late Rebellion, Vol. I, page 304, are related cases of supposed contrecoup fractures from missiles of war. "A ball nearly spent, as we may suppose, penetrated the skull in the middle of the forehead just at the edge of the hair, and there lodged without entering any further. In addition to the local injury there was found an extensive fracture of the right parietal bone."

Surgeon General Joseph K. Barnes, United States Army, says: "many of these cases must be regarded as fractures by contrecoup unless they were accidentally produced after death," which is hardly possible. In the case related above a very careful examination of the entire scalp was made soon after injury and no abrasion or swelling was anywhere found. The tumor in the temporal region over the seat of fracture was formed by slow oozing of blood, and was not observable until the afternoon of the second day.

LEXINGTON, KY.

Reports of Societies.

KENTUCKY STATE MEDICAL SOCIETY.

Stated Meeting, June 10, 11, and 12, 1896, John C. Lewis, M. D., President, in the chair.

[CONTINUED FROM PAGE 192.]

Dr. Arch Dixon, of Henderson, read a paper entitled *A Case of Placenta Previa*. This was followed by a paper on *Resuscitation of Still-born Children*, by Dr. T. B. Greenley, of Meadow Lawn. [See pages 201 and 203.] These papers were discussed conjointly, as follows:

DISCUSSION.

DR. JOHN A. LARRABEE, Louisville: I desire to say a few words in favor of the method of holding the child to be resuscitated outstretched, the neck resting between the thumb and index finger of the right hand, the buttocks in the left hand, and folding the child together as the leaves of a book are folded, first approximating the head and the feet, then unfolding and bending back, repeating this for a few moments will always insure respiration full and deep, provided it can be done.

DR. J. G. CARPENTER, Stanford: A method I have used is to take hold of the tongue of the infant with forceps, make forcible traction and relaxation. Again, another method is to invert the infant almost upon its head and use artificial respiration. I tried this for three hours in one case to revive the child, but did not succeed until I inverted it almost upon its head and used artificial respiration.

I had the good fortune to attend two women in confinement who had premature labors at six and a half months. The infants were placed in blankets, hot water bottles applied continuously, the room kept warm, and the faces of the children kept covered with cotton, except when we fed them or anointed them with lard and olive oil. We used a dropper to feed them with, giving peptonized milk and preparing it to suit the cases. One of these children is alive to-day, and is nine years old. The other lived to be but two and a half years of age, and died of scarlet fever.

DR. JOHN G. CECIL, Louisville: The case presented by Dr. Dixon is an extremely interesting one, in that it was complicated by one of

the gravest of all complications in obstetric practice. To resuscitate and keep alive a child at six months, weighing only two pounds, and after placenta previa, the mother and child both probably being almost exsanguinated, is simply wonderful. I do not think I have seen any record of such a case in any book that compares with it. I congratulate the doctor upon his success, and especially upon having so intelligent a nurse.

I have been very much interested in the incubator business that has been brought to our attention by Dr. Gilbert of our city, and I believe it is a thing that has been very much neglected. I must confess that I have neglected many infants, and no doubt I am responsible for loss of life in that way. I shall henceforth feel that I am obliged to use the methods which he has suggested, particularly the incubator.

In the matter of resuscitation of infants there are several points to be considered. We should bear in mind that there are two or three reasons why children when born do not breathe promptly. One of them is, which we may overlook, that they become strangled. The mouth and pharynx become filled with mucous, and unless it is removed they will certainly die. The means of resuscitation, or artificial respiration, will frequently fail in removing this mucous. Sometimes it is necessary, and I believe I have saved life by removing such mucous by the introduction of a small catheter, and at the risk of getting something in your mouth by drawing this mucous out. I know I saved one child which I believe would otherwise have died.

One other point in regard to the delivery of children by forceps. At this time there is a congestive asphyxia, and if we untie the cord and let it bleed for a little while, very often the relief of blood pressure on the brain will save a child that would otherwise die.

DR. R. B. GILBERT, Louisville: A word or two in regard to resuscitation of infants. The admirable paper of Dr. Greenley gives us valuable suggestions, one of which ought to be observed with a great deal of caution, and that is the method of resuscitation by blowing in the infant's mouth, having to hold the nose to do that. If the doctor is a tobacco user, his breath will have enough nicotine in it to destroy the life of the infant, and he ought to have some one else to do it.

Dr. Dixon's case is certainly the most remarkable one I have ever heard of. I have the statistics of quite a number of cases sent me by a manufacturer of incubators in New York City, and he reports several cases at six and a half months. He used wool as a bed and envelope

for the child, which I shall take advantage of in the manipulation of my incubator.

Dr. C. B. Schoolfield, of Dayton, read a paper on Cholelithiasis. [See page 205.]

DR. A. M. CARTLEDGE, Louisville: I rise simply to commend the points in the excellent paper of Dr. Schoolfield. My experience in cholecystostomy for gall-stones bears out all points made by him. I would simply like to impress upon the physician how much more common gall-stones are than we are usually led to suppose, and also how much trouble they give, and how often mistakes in diagnosis are made. Of all intra-abdominal troubles I do not think any thing in the region of the upper segment of the abdomen is as often mistaken as gall-stones. In this collection here, embracing fifteen or sixteen cases, jaundice was a symptom in only about two cases, and was pronounced in one case in which obstruction in the common duct took place, and the only death in the series. This case had a long history of the passage of gall-stone, and if the patient had been operated on before the stone got down into the common duct, when the operation is one of great magnitude to relieve the condition, I dare say the entire series would have recovered.

The most common affection that I find gall-stones confounded with is indigestion. There seems to be an idea in the profession which it is almost impossible to eliminate, and that is a person subject to gall-stones must be jaundiced. It seems impossible to get this out of the minds of the very best practitioners, and Dr. Schoolfield has told us that only three or four per cent of the many cases that came under his observation, as a rule, ever presented jaundice. These vague pains in the region of the stomach are rarely associated with any thing of great importance. Sometimes after an attack of pain they will go to a doctor's office and say that they are suffering from some stomach trouble. He will prescribe for them, and they will either come back or go to the office of some other physician. They run along in this way for years. There is never any jaundice in their cases to indicate gall-stones, and consequently attention is not directed to the gall-bladder. I operated on one case, a woman, kept her on a milk diet and on her back for four months. Every day she would pass one calculus and have an attack of pain. This woman took almost every thing recommended for dyspepsia, and during all this time she literally starved herself from insufficient food.

I have been asked the question where I get all the cases of gall-stones, and I simply answer, like Hunter McGuire, that I look for them, I examine for them, and by careful search you will find enlarged gall-bladders, especially during the history of an attack of so-called indigestion. You get occlusion of the cystic duct with retention of the mucous behind. It is spasmodic, and sometimes it is slight, the gall-bladder is not emptying itself, pain is produced, but there is never any jaundice. When you get such a history, make a request to be sent for during the attack, and by careful search under the border of the liver you will find enlargement of the gall-bladder. The enlargement in the case I operated on was nearly equal to that of a fetal head, was low down, and I thought at first it was a cyst of the right kidney. But I have learned in operating on the gall-bladder to constantly look for the kidney, and the points the doctor makes are good in differential diagnosis, with the exception that twice it has been my experience to come upon a displaced and fixed kidney, and when situated in the normal outline of the gall-bladder it is impossible to make an accurate diagnosis by exploratory incision.

I agree with the doctor, as well as in the statements made by Lawson Tait several years ago, that the operation promises to be the most successful of all abdominal procedures. I have done quite a little abdominal surgery, and if I were to say in what cases I have given the most relief, I should say it is in gall-bladder cases.

DR. W. C. DUGAN, Louisville: I was very glad indeed to hear the essayist and Dr. Cartledge emphasize the question of jaundice. I find it very rarely. When I do find it I invariably tell the patient that the obstruction is not in the cystic duct, but in the common or hepatic duct. It has a very important bearing not only upon treatment but in our prognosis; for the removal of stones in the common duct, as has been stated by the essayist, is a comparatively simple and successful operation, whereas the removal of gall-stones from the hepatic duct is one of the biggest operations known to surgery. Only a few have been removed in this manner successfully.

In regard to the symptom, I would direct attention to local tenderness and muscular rigidity, and another point is the attachment of the omentum. I did not hear the paper touch upon this latter point. When you examine the patient you will find the omentum running down in the line of the gall-bladder, behind, as it were, and you are apt to mistake it for something else. You feel it where it runs down. It is

tender and it is attached to the omentum. The line of the incision should be through the linea semilunaris or through the muscle.

With reference to attachment to the abdominal wall and subsequent irrigation I beg to make one point, and that is the danger of irrigation. I am satisfied that I killed a patient once by persistently keeping up irrigation. I irrigated too soon. Drainage was not sufficient, I tore the anchorage loose, and the fluid passed into the cavity, and what promised to be a successful operation proved a failure. I beg of you, that when you do irrigate, be certain that you have ample room for drainage in order that the fluid may pass out as fast as it passes in, or use very little force.

DR. C. B. SCHOOLFIELD, Dayton : I have very little to say in addition in closing the discussion. I wish to reiterate what Dr. Cartledge has said in regard to dyspeptic symptoms. They are the most prominent ones in all gall-bladder cases that I have seen. The patients have pain in the pit of the stomach and more or less tenderness over the region of the gall-bladder. They have vomiting, and any food taken into the stomach produces pain. But usually the pain comes on some time after taking food into the stomach, when it is passing into the duodenum, and I take it that this is a diagnostic point of biliary lithiasis.

In regard to jaundice, I have seen comparatively few cases of stone in the gall-bladder in which this symptom was present. In my paper I mentioned one point in regard to operations for gall-stones. In those cases that are excessively jaundiced the secondary operation is the best. The gall-bladder should be stitched to the abdominal wall, and drainage allowed for several days until all cholemia disappears before we undertake to remove the gall-stones from the duct.

[TO BE CONTINUED.]

Abstracts and Selections.

THE SURGICAL TREATMENT OF FOCAL EPILEPSY.—The recent discussion on the surgical treatment of focal epilepsy before the American Neurological Association gave rise to two distinctly opposite opinions as to the utility of such operations. Drs. Sachs and Gerster, of New York, presented the results of trephining in nineteen cases of focal epilepsy due to injury, cerebral infantile paralysis, or some other acute cerebral condition. Three cases were cured, two greatly improved, and three somewhat improved, while in eleven cases there was no improvement. Some of the failures to obtain a complete cure, however, were ascribed to other causes, such as indulgence in alcohol and the neglect to follow proper treatment after the operation. As epilepsy in these cases is probably due to a degeneration of the association fibers originating from the focus of disease, and as this degeneration usually develops in the course of a year or two, it is obvious that surgical interference is warranted only in those cases where not more than a year or two has elapsed after the injury or after the onset of the disease which has caused the convulsions; although in cases of depression or disease of the skull trephining is admissible even though several years have elapsed. If the epilepsy has lasted but a short time and the symptoms point to a strictly circumscribed focus of disease, excision of the cortex, after careful testing to determine the precise location of the centers involved, is justified even though it may appear normal to the naked eye. The reason why such excision has not oftener proved successful is because it has not been done soon enough, before secondary degenerations were established. In long-standing cases, where such degeneration is widespread, surgical interference is useless.

Against this comparatively favorable view of the efficacy of surgical interference Dr. Starr, of New York, presented his own experience of twenty-four operations without a single cure. He was unqualifiedly opposed to operating in idiopathic epilepsy and was skeptical as to the value of operating in focal epilepsy due to injury and disease. He recalled Van Gieson's researches into the very extensive degenerations which may follow focal lesions of the brain, which would render it impossible to remove all sources of irritation by operation.

Drs. Sachs and Gerster held that the results after operative procedure should not be considered until at least a year has elapsed after the operation. If so brief a period be adopted, the results, as Dr. Starr pointed out, would be altogether too favorable, for both in focal and ordinary idiopathic epilepsy much longer periods may occur, under various forms of treatment, during which the patient is absolutely free from any attack. Out of seventy cases of operation collected by Dr. Gray, only three remained free

from attacks after three years. Nevertheless, if a patient be suffering from frequent attacks, and we can obtain either complete or partial relief for a period of one, two, or three years by means of trephining, such an operation, considering the slight risk to life which it entails, is certainly justifiable, unless it can be shown that in later years the condition is materially aggravated by reason of such an operation. Certain cases apparently show this, but careful studies of a large series of cases many years after operation are still necessary.

While in the light of our present knowledge we would not deprecate any measure which gives any hope of benefit for so distressing a malady, another problem arises on the pathological side which demands further research. If a localized injury to the brain gives rise to epileptiform attacks as a result of adhesions or thickening of the meninges, focal hemorrhage, scar-formation in the cortex, degeneration of association fibers or proliferation of neuroglia consequent upon that injury, may not the lesions caused by operation become the starting-point of similar disturbances? It is possible to excise a cicatrix and leave a smaller scar as a result of the operation, but it is still a scar, and experience has shown that even a small scar in the brain may be the starting-point of disastrous changes. Careful experimental work on the healthy brains of lower animals may throw some light on the still vexed question of the benefits of operative procedure in focal epilepsy.—*Boston Medical and Surgical Journal.*

ENGLISH ICE-CREAM.—Certain confectioners and restaurateurs have a way of advertising their ice-cream of extra richness as Philadelphia or New York ice-cream, and charging the credulous with an extra price for the same. But for real denseness of richness the ice-cream of our sister cities is not likely to reach the standard of real London ices.

Dr. MacFadyen and Mr. Collyer have recently completed for the British Institute of Preventive Medicine an investigation into the nature and quality of the creams vended on the streets of London. "They report," says the Medical Record, "that ice-cream has only 26.5 per cent of solids, the rest being water; that the solids consist of fats, four per cent, sugar, twelve per cent, starch, six per cent, albuminoids, four per cent, and mineral matter, one half per cent. This all sounds well enough, and would lead the unwary reader to think that ice-cream was all right, but the denouement comes in the results of microscopical research. The microscope shows the presence, in London ice-cream at least, of bedbugs, bugs' legs, of fleas, straw, hair, coal dust, woolen and linen fiber, tobacco, epithelial scales, and muscular tissue. Even the microscopical examination, however, is delectable compared with the results of bacteriological studies. These reveal in street-barrow ice-cream a maximum number of seven million microbes per cubic centimeter, while the shops have only one million per cubic centimeter. The character of the micro-organisms is extremely mixed. There are the bacteria coli com-

munis, besides spirillæ and putrefactive microbes of various kinds. We find no account of a chemical analysis, which would perhaps add the final touch to the pathological picture of the ice-cream of the shops."—*Ibid.*

DETECTION OF THE TYPHOID BACILLUS.—Since the claim of Eberth's bacillus to be the specific microbe of enteric fever has been established beyond the possibility of doubt by its constant presence during the course of that disease in the substance of Peyer's and the other glands of the intestine, and in the spleen, as well as in the urine in the later stages when it is being eliminated from the system and in the evacuations and under other circumstances, chemists and amateur microscopists have not hesitated to express decided opinions as to its presence or absence in samples of suspected water or milk supplies. But there is good reason to believe that in many instances the bacillus coli has been mistaken for it, and that, on the other hand, the negative evidence based on the failure to discover it is of very little or no value. There is really no difficulty in the differentiation of the two if the proper means be taken, though conclusions drawn from mere microscopic observation are in the highest degree unsafe. The typhoid bacillus is, of course, always associated with an infinitely greater number of bacillus coli as well as others, but these and other sewage of fecal organisms can be separated from the remaining 90 per cent by their power of growing in a 500 per cent phenal gelatin. Among these that are not thus eliminated the bacillus coli and Eberth's bacillus alike form discoid colonies, large on the surface where air has access to them and small—mere specks—in the deeper parts of the gelatin, and both secrete an acid reddening gelatin to which a little litmus has been added. But the points of difference are the larger size of the colonies of bacillus coli and their yellow-brown color, those of Eberth being white, and the growth of the former is far more rapid, as is well seen in watching the progress of simultaneous stab cultures for a few days. Even more characteristic of bacillus coli are its power of coagulating milk, the evolution of gas (CH_4), and of forming indol in broth gelatin, as shown by the red color produced on the addition of a few drops of commercial nitric acid—none of these properties being possessed by Eberth's bacillus. These are sufficient, but under higher powers the individual bacilli present differences of form, those of bacillus coli being short and thick—sausage shaped—and Eberth's appearing as true rods, while with a special staining process the former are seen to have but few flagelli and the latter many and long. There is a bacillus—bacillus fecalis alkalinus—which closely resembles Eberth's in morphological and other characters, but which generates an alkali, imparting a blue color to gelatin reddened with litmus, and another—a sewage variety of proteus Zenkeri—which evolves gas, but, besides not having the power of forming indol or of coagulating milk, it liquefies the gelatin, which the bacillus coli does not; the gas bubbles therefore, instead of adhering like beads along the line of the stab, rise upward and

collect as a larger bubble at the apex of the cavity formed by liquefaction in the gelatin. With proper precautions the demonstrations of the presence of the specific pathogenic organism in the evacuations of a suspected or doubtful case of enteric fever is thus comparatively easy, but it is quite another thing when the observer has to deal with a water or milk supply suspected of being contaminated. It is obvious that the initial addition of typhoid bacilli must be infinitely less than that of the associated bacilli coli, to say nothing of others, and when others have been eliminated by means of phenol the fact remains that the bacilli coli multiply at an enormously more rapid rate than those of Eberth which they crowd out, if, indeed, the latter do not of themselves tend to extinction under the influence of daylight. The failure to identify them is therefore no evidence of their absence, still less of their not having been present at an earlier period. The best culture medium for typhoid bacilli is an acid potato gelatin, but we know of no means of encouraging their growth which will not at the same time favor the more rapid multiplication of the bacillus coli. Even with streak cultures on the surface of large plates of solid gelatin by which the colonies are most sparsely distributed, Dr. Andrews and Mr. Parry Lawes, when dealing with the undiluted sewage of a wing of the Eastern Fever Hospital containing forty typhoid cases, succeeded in detecting them in a small minority of the plates, and Dr. Klein had still greater difficulty in samples of milk inoculated with artificial cultures; while at Worthing only two or three colonies were found in 1,200 c.c. of water taken direct from the polluted well, and none of 2,400 c.c. of the same water from the mains, though there was no doubt as to the bacillus having been the cause of a widespread epidemic of over three hundred cases.—*Lancet*.

A NEW APPLICATION OF SKIAGRAPHY.—Kronberg (*Wien. med. Woch.* May 23, 1896,) arguing from the comparative innocuousness of metallic mercury when introduced into the alimentary canal, and its high atonic weight and associated opacity to X rays, suggests its use in the diagnosis of affections of the internal viscera, especially intestinal obstruction. The method recommended is to administer a certain quantity of the metal, and to observe its position in the organs by means of skiagraphy or cryptoscopy. Kronberg has been able to fill practically the whole intestine of small animals with mercury; in larger ones and in the human cadaver he can follow the course of the metal through the gut. In actual practice he considers that one to two hundred grains of mercury should be given in cases of intestinal obstruction from volvulus, intussusception, fecal masses, paralysis, etc.; Bettelheim has shown that this alone is in many cases sufficient to effect a cure, and it is claimed that with the aid of Roentgen's method the seat, and often the cause (for example, in cases of ascarides and intussusception) of the obstruction can be diagnosed. The recent application of fluorspar to skiagraphy has increased the sensitiveness of the rays more than a hundred fold, and reduced the exposure proportionately. By

this means the human trunk is also rendered skiagraphically transparent, and further researches will no doubt lead to still greater improvement in this direction. Kronberg further points out that the use of mercury may be very valuable in the diagnosis and localization of fistulous tracks and their ramifications in inaccessible parts of the body. In cases in which the use of mercury might be dangerous he suggests the substitution of the rare metal gallium, which melts at 30° C., and has only half the atomic weight (and therefore opacity) of quicksilver.—*British Medical Journal*.

A METHOD OF DETECTING THE LOCAL EXCRETION OF SUGAR IN THE ORGANS, ESPECIALLY IN THE KIDNEYS.—Seelig (*Archiv f. experiment. Pathologie und Pharmak.*, Bd. 37, Hft. 2 u. 3,) describes a method for detecting and fixing sugar in the organs just at the place of its excretion. For this purpose he employs the phenyl-hydrazin test, which he applies to the actual tissues. His observations have been made on the kidneys of rabbits, diabetes having been produced experimentally by the administration of phloridzin. The kidney is removed rapidly, and a small portion is placed for fifteen to twenty minutes in a watery solution of phenyl-hydrazin and glacial acetic acid, previously warmed in a water bath. It is then washed in water acidified with weak acetic acid, hardened in 10 per cent formol solution, frozen, and sections cut. The sections showed the characteristic yellow needles, indicating the presence of sugar, chiefly in the interstitial spaces between the uriniferous tubules. The crystals were much more scanty in the capsules of the glomeruli, while in the luminal of the uriniferous tubules they were almost absent. The chief masses of crystals were certainly situated in the interstitial vascular and lymph spaces. Seelig believes his observations show that, just as in albuminuria, the albumin can be fixed by other methods where it is excreted, so in glycosuria the sugar can now be fixed and detected microscopically by this method in the place of its excretion.—*Ibid*.

RESULTS OF LIGATURE OF THE VERTEBRAL ARTERY.—Baracz (*Centralbl. f. Chir.*, No. 24, 1896,) reports a case to show that ligature of the vertebral artery, like ligature of the common or internal carotid, may be followed by symptoms of circulatory disturbance in the brain. In an attempt at the same operation to tie both vertebrals in a young man suffering from epilepsy it was found advisable, after the vessel on the left side had been secured, to postpone the ligature of the opposite artery. Two days after the second and sixteen days after the first operation paresis occurred of both limbs on the right side and of the right facial nerve. This condition gradually disappears in the course of two months. The vertebral

thirty-six cases in which this operation had been performed by Alexander. The author's case has a physiological rather than a clinical value, as cerebral disturbance is not likely to occur except after bilateral ligature, which operation, in consequence of its proved failure in cases of epilepsy, will be very rarely, if ever, repeated. In such cases it has been found by the author that double ligature is followed at first by temporary relief, and afterward by a return of the epileptic symptoms. The slight, and transient improvement in the condition of epileptics observed after ligature of the vertebrae is attributed by the author to interference with the sympathetic nerves in the neck, and is, in his opinion, quite independent of obstruction of the cerebral circulation.—*Ibid.*

CARBONIZED STRAW AS A SURGICAL DRESSING.—Matignon (*Arch. Clin. de Bordeaux*, March, 1896,) gives a description of this substance as first introduced into surgical practice by Kikuzi, of Tokio. This substance consists of the residue obtained from carbonizing rice straw, and consists of a certain amount of incompletely burnt straw and black powder resulting from the portion wholly burnt. From a series of experiments carried out on equal volumes of wool, gauze, and carbonized straw, it was found that the amount of fluid retained by the latter after expression was considerably above that of the two former. Owing to its elasticity it is easy of application, and exerts an equal and regular pressure on all points. It is obvious that its sterilization is complete from its method of preparation, and there is hardly any substance which would be less costly, as almost any kind of straw will serve equally well. Its method of preparation and use are as follows: Combustion is allowed to take place slowly, and without any current of air. As a practical point this may be done in a kettle. When finished the straw is freed as much as possible from ash, and placed in small sachets which have previously been rendered aseptic and made to any desired size or shape. These can be refilled with fresh carbonized straw when required. All these points would show that in carbonized straw we have a most effective material for dressings, and particularly advantageous to the military surgeon.—*Ibid.*

MASSAGE IN THE TREATMENT OF JOINT FRACTURE.—Pello (*Archiv. di Ortoped.*, An. 13, fasc. 3, 1896,) draws attention to the value of early massage and passive movement in the case of intra-articular fractures. He believes that the usual method of treatment by prolonged fixation delays recovery, and only too often leads to ankylosis. He then reports three cases where massage was practiced at once, and where the only fixing apparatus was a starched bandage freely cut away so as to allow of the massage. The first case was that of a boy, aged six, with intra-articular fracture of the trochlear process of the right humerus. Light massage was practiced at once, and gave much relief to the pain; the joint was put up in a starched bandage. The next day a good part of the bandage was cut off, and twenty

minutes' massage practiced. On the fifth day slight passive movement of the joint was commenced. On the tenth day the bandage was discarded ; at the end of the month the elbow was as free in its movements as before the fracture. The second case was that of a man, aged thirty-eight, with Colles' fracture, treated in a similar way and completely cured, with free movement and no deformity on the fifteenth day. The third case was that of a man, aged forty, who fractured his tibia and patella. The tibial fracture was treated in the usual way ; the patellar fracture was unrecognized at the time, and after seventy days' treatment, when the patient was first seen by the author, although the tibial fracture was healed the patients' limb was useless, as the patellar fragments were distant two centimeters and only worked by weak fibrous union. Massage was practiced, and after fifteen days the patient could walk with crutches, the edema disappeared, and flexion of the knee (previously rigid) could be obtained. At the end of a month the patient could walk well with a simple stick ; in two months he could walk upstairs, so that no one would suspect there had been any injury to the limb.—*Ibid.*

EFFECTS OF ATROPINE ON RESPIRATION.—Unverricht (*Berl. klin Woch.*, June 15 and 22, 1896,) draws attention to the harmful effects of atropine upon the respiration. He observes that the results of treatment by antagonists, such as morphine poisoning by atropine, have been only moderate. It is incorrect to assume that the respiration is improved because it becomes more rapid. The author's investigations have shown that there is no antagonism between morphine and atropine as far as the respiration is concerned. Atropine can produce Cheyne-Stokes breathing, and an agent which can call forth this phenomenon can not be looked upon as a respiratory stimulant. Both morphine and atropine can produce in man breathing of the Cheyne-Stokes type. Orłowski has made abundant experiments in the author's laboratory upon the action of atropine on the respiratory centers. Dogs can bear doses of atropine which the human subject can not. From the experiments it is shown that after the first injection of atropine the volume of the breathing is diminished, and that a further diminution is noted after a second injection. Eventually the volume may be increased just before general convulsions show the exhaustion of the nervous centers. Thus this increase is a manifestation occurring shortly before death. The frequency of the respiration showed generally a striking constancy. When increase in the volume of the breathing occurs, this can only be due to alteration in the depth of the breathing. The author then relates his investigations into three cases of atropine poisoning. All the cases recovered, and the only symptom which caused any anxiety was the severe disturbance of the mechanism of respiration. These cases show how little atropine can be looked upon as a respiratory stimulant. In one case 1 cg. atropine sufficed to produce severe respiratory difficulty. The objection that smaller doses of 2 to 4 mg. act favor-

ably on the respiratory centers is theoretical and is not proved. The author refers to recorded cases of atropine poisoning in which severe respiratory disturbance has been produced. He concludes that atropine is not a respiratory stimulant, that even in small doses it produces an unfavorable action on the respiratory centers, and that in severe cases of morphine poisoning atropine is not to be recommended.—*Ibid.*

ENDOMETRITIS DECIDUA.—Bulius (*Munch. med. Woch.*, June 9, 1896,) discusses the morbid anatomy of a polypoid form of this affection. The specimen consists of a hyperplastic formation in the decidua vera, which was thrown off in a mass 6 cm. broad by 11 cm. long. On the inner surface, facing the ovum, projections and polypoid excrescences were present. The decidua reflexa was smooth and not thickened. The overgrowth was made up of decidual cells of somewhat smaller size than usual. These cells showed in many places retrogressive changes. There was a great abundance of vessels, often with thickened walls. On this surface of the decidua there was no epithelium. Toward the uterine surface, however, there were fairly numerous glandular spaces, lined with epithelium, and separated from each other by decidual cells. In the tissue afterward removed by the curette these glandular elements were found to be arranged very irregularly, with a spindle-shaped connective tissue lying between them. The chorionic villi showed no abnormal changes. The author refers to the literature of the subject, and says that since the writings of Ahlfeld and Lewy no case of exactly the same character to the one described by him has been reported. This specimen was obtained from a woman aged twenty-one, who had given birth to a dead child in February 1895. Hemorrhage occurred during the following six weeks, and then ceased under the use of hydrastis. Four weeks later menstrual periods returned until September, when amenorrhea began. In December an ovum along with the above-named mass was discharged. Masses of decidua and blood clots were removed with the curette, and later the patient was again in good health. In most of the recorded cases the women have been young and strong. Syphilis has been stated to be the cause of this affection, and the birth of a dead child favored this view here. Yet there was no evidence of syphilis either in the patient or in the husband. The normal condition of the chorionic villi was also against syphilis.—*Ibid.*

TREATMENT OF SUMMER DIARRHEA.—Reinach of v. Ranke's clinic (*Munch. med. Woch.*, May 5, 1895,) observes that the treatment of acute gastro-intestinal affections in quite young infants has two objects: (1) The prevention of the ill-effects due to the consequent thickening of the blood; and (2) rest for the diseased tract. A third indication may be put down, as the providing nourishment in other ways. The first indication is met, though often imperfectly, by stimulants, mustard baths, etc. Monti and Epstein practiced with good results the subcutaneous infusion of saline

solution. Grawitz showed that the injection of serum produced a thinning of the blood. With this object the author has treated 15 cases of infantile diarrhea with sterile serum obtained from calves. Only the worst cases were selected for this purpose. Of the 15 cases 4 died, but two of these had, in addition to the gastro-intestinal affection, broncho-pneumonia; 10 to 20 c.cm. of the serum was injected. In one case a measles-like eruption appeared in 14 days. The age of the infants varied from 14 days to 9 months. The effect of the injection upon the general condition was decidedly good. The collapse temperature rose to normal. Twice fever occurred after the injection, the temperature once rising to 38.5° C. Usually the injection was given in the evening, and on the next morning improvement was noted. No local treatment was adopted. Rice-water was given during the first 24 to 48 hours. The author then refers to recent attempts to inject albuminous bodies subcutaneously. In 20 c.cm. of serum the amount of albumin is small, but perhaps larger quantities of the serum might be used. In 20 c.cm. of serum there is 1.5 g. albumin, and this amount corresponds to 50 g. undiluted cow's milk, and 150 g. mother's milk. The absence of fat could be compensated for by the injection of cod-liver oil. A deficiency in the nourishment will, however, still remain. The abstention from feeding by the mouth need only extend over one to two days, so that help ought to be given by the injection of even small quantities of assimilable nutrient material. This treatment is being further investigated in the clinic.—*Ibid.*

COLD BATH IN TYPHOID FEVER.—Of this measure Prof. Osler says: "The cold-bath treatment, rigidly enforced, appears to save from six to eight in each century of typhoid patients admitted to the care of the hospital physician. While I enforce the method for its results, I am not enamored of the practice. I have been criticised rather sharply for saying harsh words about the Brand system. To-day, when I hear a young girl say she enjoys the baths, I accept the criticism and feel it is just; but to-morrow when I hear a poor fellow (who has been dumped like Falstaff, 'hissing hot,' into a cold tub) chattering out malediction upon nurses and doctors, I am inclined to resent it and to pray for a method which may be, while equally life-saving, to put it mildly, less disagreeable."

SMALLPOX AND YELLOW FEVER IN CUBA.—The United States Marine Hospital Service reports that the smallpox in Cuba is increasing daily and is of a most virulent form. Over eighty per cent of the cases occur among the unvaccinated blacks. The yellow fever is also of a malignant form, most of the cases ending fatally. As usual it is difficult to obtain any accurate report of the number of cases.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ.*"

Vol. 22.

SATURDAY, SEPTEMBER 19, 1896.

No. 6.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.
JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

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THE TRAINED NURSE.

The Boston Medical and Surgical Journal of the 10th inst. devotes a thoughtful editorial to the trained nurse, her work, her trials, her ambition, her relationship to the medical profession, and her destiny.

The article is based upon the thoughts suggested by the following extract from a letter by one of her calling to the British Medical Journal of August 22, 1896. She says:

We are exceedingly glad that public notice is being turned to the present condition of hospital nurses, which is just now in a transition state and certainly needs reorganizing. Public committees still require of us all the menial ward work which uneducated nurses of former times used to do, not knowing, perhaps, that the medical staff who instruct us after our long day on duty exact of us ever more intelligent work, and an almost military smartness and discipline. All this, with the needs of the sick, the bad air of the wards, and the sad sights therein makes the three years' hospital training so great a strain that a nurse's health suffers, and is in some cases impaired for life. But this state of affairs ought not to continue. There should be three sets of nurses, each working eight hours, as there are at King's Hospital, London, and in some American hospitals; then we could have lectures on all the branches of our profession, with practical experience, and our hospitals would become first-rate training schools. Let the ward work be done by illiterate ward maids—and the nursing would be more thorough in consequence. Although our hours on duty are much too long, we often have not time to do both well. Legislation has stopped factory girls from working more than nine hours a day, with Saturday afternoon and Sunday free. Our days all the year round are twelve to twelve hours and a half, the work being hard and often depressing.

In comment the editor says:

Unquestionably the above statements involve a real problem, which will soon come to demand some sort of a solution. It is really a question of education. The correspondent is right in saying that more and a more intelligent work is being exacted from the trained nurse, while certainly in many hospitals she is still required to do the menial work of the ward. There is a certain incongruity in noting at one moment changes in pulse or temperature or general physical condition in the patient under her charge, and at the next attending to work which any absolutely untrained person could equally well perform. In other words, the nurse, through her training and lectures, is coming to look with disfavor on work which a few years ago would have been called the essence of nursing, and finds herself now in a position almost of assistant to physician in charge.

The skilled nurse recognizes her value to the community at large, and particularly to the physician with whom she may happen temporarily to be associated; and the physician is rapidly becoming more and more dependent upon his nurse actually in the treatment of his case. His attitude is becoming that of adviser and director, but he is infinitely less capable, as a rule, of actually caring for his patient as his forefathers would have done, than is his skilled nurse.

The skilled nurse of the present day marks an interesting transitional type. She is far too clever and intelligent to look upon the menial work of her office as a satisfactory end in life. She is ambitious to know, not only that her patient is more or less ill, but just how and why and where he is ill. She has the cravings of a physician, without the means of gratifying her cravings. All this is commendable, but is it a part of the qualifications of a nurse as such?

Not long since it was suggested to us by a fellow-physician, that the outcome of the whole matter might be that the highly-trained physician of scientific bent who chafes at the irksomeness of the details of practice would stand to the community in the constant attitude of a consultant, while the nurses as then constituted would play the part of family doctor.

The prophecy may reach fulfillment, for all things are possible in a shifting state of society. In the mean time, however, certain questions concerning the training of nurses are pressing for solution.

What is to be the outcome of our training schools? Is there not danger that instead of making good nurses we may be encouraging a school of poor physicians, who lack only the title of Doctor? Are the numerous lectures now everywhere given to nurses conducive to their best training as nurses? Is not a little knowledge just here a dangerous thing? What limits are to be set to their medical education?

Comment on these comments is scarcely necessary. The trained nurse (whether she be regarded as a powerful ally to the physician in

his battle with disease, or as a handicap which the surgeon has saddled upon him), has come, and come to stay.

That in her proper place she is a valuable factor in the successful management of a case can not be denied; but that she is too often inclined to usurp the physician's prerogative is patent to any one who has had her services. In not a few cases she has been known not only to give the doctor's medicines upon her own judgment, but she has now and then introduced new remedies without consulting the physician in charge, while in a few (extreme cases) she has been known to use her influence against the unfortunate incumbent in favor of some other doctor who stands more in her favor.

Of course these are extraordinary errors, and made only by nurses whose conceit or prejudices outweigh their good sense and judgment. The average nurse, we believe, always does her best to please the physician in charge of the case, and her errors are only errors of judgment.

But the nurse might be more efficient and more certainly carry out her real office in the sick-room if her studies were the theory and practice of nursing, and not the theory and practice of medicine and surgery as is now the case in our training schools.

There is no reason why nurses should be taught, by embryo would-be medical college professors, anatomy, physiology, semiology, obstetrics, chemistry, toxicology, materia medica, therapeutics, and hygiene. This is pre-eminently the curriculum of the physician, and the nurse has no business with it. She should be taught by experienced surgeons, physicians, and nurses the art of ministering to the sick under the medical attendant's care, and nothing more.

Such reform would rob some ambitious young doctors of an opportunity to pose as teachers of things wherein they themselves often stand much in need of teaching; but it would give us a corps of real nurses bent earnestly and intelligently on carrying out the doctor's orders, and not "a school of poor physicians, who, lacking only the title of Doctor," too often stand in the doctor's way, conditioning his usefulness, if they do not thwart his purposes.

MORNING-SIDE RETREAT.

We are pleased to learn that this well-known institution has secured the services, as medical superintendent, of Barton W. Stone, M. D.

Dr. Stone is one of the foremost alienists of the country, having won the title by many years of efficient work as manager of the Western Kentucky Asylum at Hopkinsville. His call to the Morning-side Retreat will add greatly to its popularity and worth, and the directory is to be congratulated upon their selection.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

This old and famous society seems to have had a meeting of unusual interest at Saint Paul during the week. The attendance was large, and science and pleasure were blended with happy effect.

The election of Dr. Thomas Hunt Stucky as president and Dr. Henry E. Tuley as secretary were well merited compliments to the profession of Louisville. The next meeting will be in Lexington in the well-selected month of October.

Notes and Queries.

"WHAT IS HYPNOTISM?"—A meeting of the Society for Psychical Research was held at the Westminster Town Hall on July 10th, whose proceedings are worthy of report. Professor William Crookes, F. R. S., the President of the Society, was in the chair.

Dr. J. Milne Bramwell read a paper entitled "What is Hypnotism?" He commenced by giving a short account of the mesmerists and the controversy between them and James Braid. According to the former, mesmerism was a physical power possessed not only by man but also by magnets and other inanimate objects; according to the latter, the phenomena were purely subjective and resulted from changes in the nervous system, not of the operator, but of the subject. At first Braid's explanation of the phenomena was a purely physical one, and since his day various attempts have been made to explain hypnosis from the same standpoint. Dr. Bramwell gave an account of three of these: (1) The Salpêtrière theory, which

explained hypnotic phenomena by the assumption of a morbid nervous condition. This position has been rendered untenable, since very extended statistics have been shown that 95 per cent of mankind at large can be hypnotized, and that the most difficult to influence are the hysterical and ill-balanced. Many of the errors of the mesmerists in reference to metals and magnets have been revived by this school, and apparently from the same cause, viz., failure to recognize the influence of mental impressions during physical experiments. (2) Heidenhain's theory, which explains the phenomena by a cerebral inhibition, and entirely depends upon the assumption that hypnotic acts are performed unconsciously. The experimental demonstration of the conscious nature of hypnotic acts robs this theory of all value. (3) The theory of Mr. Hart, which explains the phenomena by means of cerebral anemia. There are two fatal objections to this view, (1) it has been experimentally proved that cerebral anemia is absent during hypnosis; and (2) changes in the blood supply of the brain are not the cause, but the result of changes in the activity of the nervous matter. Braid's later theories explained the phenomena entirely from a psychical standpoint. He considered the condition essentially one of mono-ideism. This view was adopted by Professor John Hughes Bennett in 1851, and explained physiologically by the assumption of a functional disturbance in the "fibers of association," with resulting suspension of the connection between the ganglion cells of the cerebral cortex. Psychologically he explained it by "dominant ideas." A suggested idea acquired undue prominence because, owing to the disconnection between the cerebral ganglion cells, it was unattended by its usual swarm of subsidiary ideas and lacked their controlling influence. The genesis of ideas was not interfered with, only their voluntary synthesis. At a much later date this psychological explanation was adopted by Professor Bernheim. His views differ, however, from those of Braid and Bennett in one important point. The latter presupposed a definite change in the nervous system as essential for the production of hypnotic phenomena; the former thinks that the only difference between the hypnotized and the normal subjects consists in the increased suggestibility of the former and finds in "suggestion" an explanation of all hypnotic phenomena. Hypnotic phenomena, however, differ frequently in kind as well as in degree from those of the normal state, and the subjects who are most suggestible in hypnosis are generally those who had constantly resisted suggestion in the normal condition. Dr. Bramwell referred at length to Professor Bernheim's view that crime could be successfully suggested to the hypnotized subject, and pointed out that this belief rested upon laboratory experiment and the assumption that the subject was passing through a mental condition similar to that of the operator. A simple and important test has been omitted, namely, that of questioning the subject in hypnosis as to his own mental state. When this was done it was invariably found that the subject fully recognized the imaginary and experimental nature of the suggested crime. Dr. Bramwell

held that neither the intelligence nor the volition was necessarily interfered with in hypnosis and that the subjects, instead of being ready to commit crimes, in reality developed increased moral sensitiveness. Dr. Bramwell pointed out that there existed a powerful argument against the explanation of hypnosis by means of mono-ideism or dominant ideas, namely, that a wide range of different phenomena could be simultaneously manifested by the hypnotized subject. The most recent explanation of hypnotism—and apparently the most satisfactory—was to be found in the supposed tapping of some subconscious state and the evoking of a secondary personality. According to this view, the hypnotized subject, instead of being a stunted and maimed normal individual, in reality possessed far-reaching powers over his own organism which were not paralleled in the waking state. The researches of Azam and others have demonstrated the existence of alternating personalities without the intervention of hypnosis, while recent hypnotic observations not only show the existence of the alternating personalities but demonstrate also that they co-exist and communicate with each other. Before this theory can be accepted as a complete explanation of hypnotic phenomena an answer must be given to two questions: (1) What is the connection between hypnotic methods and the production of the subconscious state? and (2) How did the secondary personality acquire its rich physical and mental endowments? To the first question, according to Dr. Bramwell, nothing approaching a satisfactory reply has yet been given. An attempt had been made to explain the latter by the assumption that the secondary personality was able to voluntarily control functions which in some lower ancestral form had been performed consciously, but were now, as the result of development, performed automatically. Dr. Bramwell pointed out that there were many objections to this explanation, chiefly in regard to the intellectual phenomena of hypnosis. The increased intelligence and higher refinement of the hypnotized subject could hardly be explained by the assumption that the lost powers of some lower animal type had been evoked.—*Lancet*.

BUBONIC PLAGUE IN HONG KONG IN 1896.—Sir William Robinson, in his capacity of governor of the colony of Hong Kong, has sent a very instructive report to the Colonial Office on bubonic plague in the settlement during the present year. To the date of his writing on May 6th there had occurred 675 cases, and of these 602, or a little more than 89 per cent of attacks, had proved fatal. In 1894 the mortality had been at the rate of 93 per cent of the cases treated in hospitals. But even this high rate took no account of dead bodies found in the streets, and so the disease of the present year is looked upon as of a milder character than that which prevailed in the year just named. And, again, the mortality of the present epidemic is the more favorable since it is stated that all deaths have been heard of, a circumstance not to be thought of as having obtained in 1894. All the patients were Chinese except twenty-two, consisting of six Euro-

peans, four of whom died ; fifteen Indians, of whom six died ; and one fatal case in a Siamese. The first case arose on January 4th, and up to the close of the month there had occurred forty-five cases, deemed to be of a sporadic nature. The disease then increased, as many as forty-one, forty-five, sixty, and seventy-seven cases occurring in some of the succeeding weeks. In the last complete week reported upon—namely, that ended May 2d—there were sixty-three attacks. The disease was therefore still epidemically prevailing at that time. The precautions taken were the removal of every sufferer at once to hospital and the segregation on roomy junks of all the members of invaded houses until the numbers became so numerous as to make it impossible to continue this practice. The infected houses were taken over by the police and disinfected, cleansed, and the like, and all precautions of disinfections of clothing taken. When it became impossible longer to segregate members of invaded dwellings on the junks the authorities decided to allow residents to proceed to Canton under restrictions. The plague was at this time prevailing also in Canton. The visiting staff at the disposal of the Government was enlarged to cope with the immense strain on the few members permanently engaged, and while the antipathies of the Chinese were much less pronounced than in 1894 against the action taken for the purpose of stamping out the disease, still the trouble caused by the desire of the natives to conceal cases and dead bodies was of a kind to call for great tact and patience. So imperative did it seem that steps should be taken to allay suspicion on the part of the Chinese as to the motive which prompted the authorities in the measures they were adopting that it was soon decided to permit the removal of patients, and later even of bodies, by relatives to the mainland under regulation ; and while this had in some degree at least the result desired, only one patient and only four dead bodies were removed. House-to-house visitation was largely carried on, and the condition of housing of the Chinese found to be of a character calling for the appointment of a commission of inquiry into the question. The plague is classed as a filth disease, and was confined to the poorer classes of Chinese, whose dirty and insanitary habits foster its progress. The accumulation of dirt and rubbish is surprising, and bad ventilation, overcrowding, and inadequacy of light, added to high rents, aggravate such a malady as plague. But in connection with the disease generally Sir William Robinson holds the view that unless its recurrences can be prevented great harm must accrue to the colony, and he is of opinion that it will be difficult to stay its spread in Hong Kong so long as it continues to prevail on the adjacent mainland. The matter is pressing and presents problems difficult of solution.—*Lancet*.

CHANGE OF AIR.—We are all—whether our way of life lies along the sweltering streets of a crowded city or in the glare and dust of country roads, whether we are slaves of the stethoscope, the scalpel, or that humble necessary instrument the pen—beginning to long for a temporary

escape from our usual environment. Dr. Louis Robinson's article on the Science of Change of Air in the current number of the National Review is therefore both opportune and stimulating as giving a foretaste of pleasures to come. He points out that while the air of health resorts is comparatively free from disease germs and organic impurities, this is not the whole secret of the matter. Why of two coast towns only a few miles apart, and both situated at the same height above the sea, should one have a "bracing" and the other a "relaxing" climate? Chemically, the differences in the air are inappreciable. Dr. Robinson throws out the suggestion that some of the innumerable harmless micro-organisms amid which we live and move and have our being may be responsible for some of the mysterious differences in the quality of air which, though at present inexplicable, profoundly affect the health and spirits of mankind. Then the subtle influence of emanations from the soil, from vegetation, and from other animate and inanimate objects must be taken into account.

Considering the depressing or exhilarating effect of many substances, chiefly carbon compounds, which are introduced into the lungs in a vaporized or finely-divided state, Dr. Robinson is inclined to think that the invisible airborne matters which may so affect us for good or evil are mainly organic in their origin. He points out that, apart from the question of the relative purity of the atmosphere, there is a peculiar virtue in mere change. He compares this with the effect of change of diet, and with the increased therapeutic effect which often results from an alteration in the mode of administering drugs. There is doubtless a good deal of truth in this, but when Dr. Robinson cites the case of a sufferer from asthma and bronchitis, whose home was in a healthy part of Surrey, and who obtained very great relief by a short residence among the slums of Seven Dials, as an illustration of the beneficial effects of mere change, we venture to think that the case is hardly relevant.

Asthma, as is well known, is particularly capricious in its reaction to climatic or other local influences; indeed, it may almost be said that each asthmatic is a law unto himself in this respect. The sufferer in question was probably benefited not by the change from the vivifying air of Surrey to the ancient and fried-fish-like smells of Seven Dials, but by some special quality in the latter which suited his respiratory apparatus. On the general question of the benefit of mere change, however, we are entirely at one with Dr. Robinson. He traces this to the fact that man was a wanderer on the face of the earth for countless ages, during which the habit had time to make an impress on every cell and fiber of his frame which civilization has not yet been able to obliterate. The logical outcome of his teaching

habits." Dr. Robinson seems, however, to leave out of account a factor which is even more important than vagrancy—that is, the total freedom from care or any thought for the morrow which such irresponsible nomads enjoy. A man on whose shoulders the burden of life lies heavy will get little benefit from "change of air," though he seek for it in the most distant climes, if wherever he goes *post equitem sedet atra cura*.—*Ibid.*

AFEBRILE SCARLET FEVER IN A TUBERCULOUS SUBJECT.—An account of a case observed by Lemoine is recorded (*Journ. de Méd.*, June 10, 1896). A tuberculous subject was attacked by severe scarlet fever, without at the same time any marked general symptoms. The nature of the eruption was characterized, not only by desquamation, but by the fact that a neighbor contracted the typical disease. The exceptional points in the case were: (1) That there was no pyrexia, and (2) the fact of its occurring in a tuberculous subject, for some authors believe that tubercle and scarlet fever are absolutely antagonistic, while others admit that it is rare, and that when it does occur all the pulmonary symptoms become aggravated. In the present instance it was noticed that from the beginning of the eruption the lung symptoms rapidly subsided, the *râles* almost disappearing, and the cough and expectoration ceasing, and after the disappearance of the eruption the improvement continued. In many other respects the case was exceptional, there being no *malaise*, rigors, or gastric disturbance, nor the characteristic throat. The eruption remained much longer than is generally the case. The author quotes Rilliet and Barthez as giving four in eighty-six cases of scarlet fever without pyrexia, and in them general symptoms were absent and the eruption slight. Fiessinger also quotes eleven cases of afebrile scarlet fever, all of which were slight. In the present instance, though the general symptoms were not marked, the eruption, as already stated, was severe, and the patient developed well-marked nephritis.—*British Medical Journal*.

THE OPERATIVE TREATMENT OF JACKSONIAN AND FOCAL EPILEPSY. C. B. Nancrede (*Annals of Surgery*, August, 1896,) reports some cases of Jacksonian and focal epilepsy which he has operated upon. The course pursued by other cases of epilepsy upon which he has operated confirmed the conclusions to which he has reluctantly been forced, that (1) Removal of the discharging lesion in cortical and Jacksonian epilepsy can only be regarded as palliative, the operative scar in all instances thus far accessible to him in time becoming a new source of irritation. (2) The earlier the operation is done after the disease becomes fully established the longer will the immunity last, and it is possible that if trephining is done very early the operation may in a few instances prove curative, especially if any reliable method can be devised to lessen the extent of the inevitable scar and adhesions between the brain and the membranes. (3) That operation is not so dangerous in competent hands as to forbid our urging trephining in

this class of epilepsies, especially when done early, because the chance of prolonging immunity is great, and the fits are apt to be slighter and to recur at greater intervals after relapse than before trephining. (4) Removal of the discharging lesion is imperatively demanded as a life-saving measure in those rare cases where the intervals between the fits are so short that the paroxysms are practically continuous. (5) In all cases, but especially in those characterized by frequent paroxysms, it is an error in practice to permit the early resumption of work, particularly manual labor. Thus the author calls attention to a case in which he trephined for ordinary traumatic epilepsy, which remained perfectly well for nearly two years, until, attempting to lift a heavy weight, the encephalon becoming suddenly congested, the patient at once had a fit, since when the convulsions have been nearly as frequent as they were before operation. (6) Operation removes only one of the factors productive of epilepsy, but the ready response to inadequate stimuli still remains, and can only disappear, if ever, after a prolonged period; therefore, careful avoidance of every thing which either through the mind or body can excite sudden and severe acute cerebral congestion or undue prolonged mental strain, constant congestion of the nervous centers, must be avoided for the longest practicable period—for the remainder of life if possible.

DIABETES INSIPIDUS IN CHILDHOOD.—Eichhorn (*Jahrbuch. f. Kinderheilkunde*, Bd. xlii, Hft. 1,) describes a case of this disease in a boy ten years of age. He investigated the relation between the quantity of fluid taken in and that of urine passed. Taking a healthy boy as a control, and giving to both the same quantity of fluid *per diem*, he found that the diabetic patient after the first twenty-four hours passed more than three times the amount of urine passed by the other. Attempts to reduce the amount of fluid taken by this patient had to be abandoned after twelve hours, owing to the severe constitutional disturbance set up. Polyuria, however, continued during this period, notwithstanding the reduction. The author gives a summary of the views of Strauss, Senator, Falck, and Neuschler on the mode of productions of the polyuria, and then discusses the etiology of the disease. In this section he gives a valuable collection of previously recorded cases. He describes cases of diabetes insipidus occurring in connection with certain specific infectious diseases, such as diphtheria, cerebro-spinal meningitis, measles, scarlet fever, etc. These must be distinguished from the cases of transient polyuria described by Spitz, which occur during convalescence after certain specific fevers, especially typhoid. In these cases the polyuria lasts from six to eight weeks, and is not accompanied by polydipsia. This condition is probably due to altered composition of the blood. Cases are also recorded in which degenerative changes have been found in the sympathetic system, notably in the celiac plexus and the great splanchnic nerves. In two of these cases there was found ulceration of the intestines.—*British Medical Journal*.

DISSEMINATED SCLEROSIS WITH APOPLECTIFORM ONSET.—Boulogne (*Rev. de Méd.*, May 10, 1896,) records a case of disseminated sclerosis with an absolutely sudden onset. Besides the ordinary form which develops slowly, taking about a year, there are cases, usually following an infectious fever, in which the onset is more rapid—three weeks to two months. In a third rare form the disease comes on with an apoplectic stroke and paraplegia. In this case the patient, a healthy man, aged forty-three, with no history of syphilis, alcohol, or malaria, quite suddenly lost consciousness; on awaking there was paraplegia and paresis of the arms, but the sphincters were paralyzed; the face was unaffected, and there was no intention-tremor and no nystagmus. Ten hours after the onset he recovered sufficiently to be able to get home with assistance from two friends. A month later control over the bladder and rectum returned. Two months after the onset tremor and nystagmus were noticed, and other classical symptoms developed very rapidly, so that within another month he was confined to bed. Very considerable improvement, however, then took place while the patient was under observation. Somewhat similar cases by Vulpian and Peter are quoted. The author's case is more acute than any previously recorded. The interest of the case is in the explanation of the sudden onset. The author suggests that areas of sclerosis had quietly formed and remained latent in the brain, and that, under the influence of some cause or other, congestion had been set up around the plaques, and thus given rise to hemorrhage. *Ibid.*

SPLENECTOMY.—A. A. Lendon (*Intercolonial Med. Jour. of Australasia*, June 20th,) reports what he claims to be the first case in which splenectomy has been performed successfully in Australia. Two other splenectomies have been recently reported in Australasia: one performed by A. G. Hamilton in 1885 for leucocythemia, the patient dying of shock in twenty-four hours; the other by Gardner for hypertrophy secondary to cirrhosis of the liver, the patient dying on the twenty-first day. Lendon's patient was a woman, aged twenty-one, suffering from wandering and hypertrophied spleen. She was very anemic, and had had "indolent" ulcers of the legs for some years. On palpating the abdomen a large tumor was immediately felt; it had a fluctuant feel, was elongated vertically, and was very movable laterally, but seemed to occupy the right side of the abdomen more than the left; no notch or edge could be felt; its lower edge reached the true pelvis. The diagnosis seemed to rest between a tumor springing from the pelvic organs, a renal tumor, a hydatid of the omentum, and a chronic abscess. At the operation the tumor was recognized as splenic by its blue slate color; there were no adhesions; three notches could be felt on the left side, indicating that the organ had become rotated half a turn. The incision was enlarged to five inches, and the spleen easily delivered from the abdominal cavity. The pedicle was of such a length that the operation could be completed entirely outside the abdominal cavity, but

beyond the splenic vessels it consisted of nothing but a little fat, inclosed in the flimsy thin layers of gastro-splenic omentum. The main artery was first tied with No. 3 silk, then the pedicle was made nearer the spleen with stout silk; clamps were applied to the splenic side of the ligature, and the organ cut away; for additional safety other fine ligatures were applied to the stump, which was dropped back into the abdomen, and the wound closed and dressed in the usual way. The spleen and the blood contained in it weighed forty and one half ounces, afterward eleven ounces by weight of blood drained out of it. The viscus was quite solid, and sections showed under the microscope that there was some degree, not a great degree, of fibrous overgrowth. Recovery was interrupted by febrile disturbance, but was finally complete. Some six weeks after the operation an examination of the blood showed four hundred and eighty-six red corpuscles to one white and 4,860,000 corpuscles to the cubic millimeter, the normal being estimated at 5,000,000. One singular feature in the patient's case is the family history. One sister (deceased) was known to have had an enlarged spleen, although she does not appear to have died from splenic disease; one brother has an enlarged spleen, likewise a sister, whose child is also affected in the same way. Lendon adds that he is giving his patient bone marrow with the view of counteracting the cachectic state which is regarded by some as certain to become developed in patients who have had their spleens removed.—*Ibid.*

ANTISTREPTOCOCCIC SERUM.—Schleicher (*Wein. medicin. Presse*, July 5, 1896,) records a case in which Marmorek's antistreptococcic serum was used with apparent success. The patient was a woman of twenty-nine, whose illness began with bronchitis, and a temperature ranging from 100.4° to 103.2°. There was violent cough both by day and night, with abundant frothy muco-purulent expectoration, showing little clots. On the fifteenth morning the temperature rose to 104°, and signs of broncho-pneumonia appeared in both lungs; the sputum contained numerous pus corpuscles but no tubercle bacilli or blood. A week later the physical signs were unchanged, but the patient was very weak and wasted, and appeared to be in imminent danger; the temperature fell at night but rose every morning to 102° to 104°. On the twenty-first day of the disease 20 c.cm. of antistreptococcic serum (obtained direct from Marmorek in Paris) were injected, followed twenty-four hours later by another 10 c.cm. The forearm, which was the seat of injection, developed an erythema, which spread over the entire arm but disappeared in two days. The patient became much better, the temperature falling to between 99.6° and 100.8°, and the appetite to some extent returning. Eleven days after the injection a general eruption broke out, attended with joint pains, and the diagnosis was made of peliosis rheumatica. Three days later there was a sudden rise of temperature to 105.8°, associated with trismus, loss of power in the lower limbs, and sense of impending death. This condition lasted for three days,

when it terminated by crisis, associated with copious night-sweating. The eruption cleared up, as also did the lung condition; the appetite returned, and though convalescence was slow the patient was perfectly well a month later. Schleicher considers the course of events to indicate that the eruption was not peliosis but an effect of the serum, comparable to the similar results of diphtheria antitoxin. He also holds that the crisis was not spontaneous, but was also to be attributed to the action of the serum. With regard to this action he regards it as having been distinctly beneficial in his case, which would therefore indicate an extensive trial of the remedy.—*Ibid.*

SERUM TREATMENT OF OZENA.—Scrafino and Della Vedova (*Arch. Ital. de Biol.*, xv, 2,) have made bacteriological investigations of sixty-three cases of ozena. The most important of previous researches on the subject were those of Abel, who concluded that the disease was due to the bacillus mucosus ozena of the same family as the pneumo-bacillus, but differentiable from it; it is found in the secretion during all stages of the process, but never penetrates into the mucous membrane. The authors confirm his views as to the constancy of this bacillus, but hold that it is not the veritable cause of the disease, which they attribute to another micro-organism found by them in the substance of the mucous membrane itself. This is a small bacillus, which colors readily with gentian violet or by the Gram-Weigert method, and often shows more deeply stained granules in its substance. It is best cultivated on coagulated serum, upon which it shows in twenty-four to thirty-six hours little grayish elevated colonies, frequently elevated, and consisting of long bacilli, staining readily when fresh. It is not easily detected in sections of the mucous membrane, but may be readily demonstrated in scrapings from the latter. In biological characteristics this bacillus belongs to the same family as the diphtheria bacillus, the pseudo-diphtheria bacillus, and the xerosis bacillus of Neisser; the authors enumerate the points of resemblance and distinction between these different forms. The genetic resemblance induced them to try the effect of anti-diphtheria serum in thirty-two cases of ozena in which the bacteriological diagnosis had been made. Of these sixteen were completely cured, seven showed great improvement, and were at the time of writing nearly well, four were markedly better, and the remaining five showed a slight amelioration.—*Ibid.*

A CINCINNATI PHYSICIAN has been arrested upon the charge of violating the U. S. Postal laws in sending through the mails a threatening postal card. The card was sent to a man whom the doctor claims owed him \$106, and whom he threatened to put to trouble if the account was not paid by a certain time.

INSURANCE against twins is the latest.

Special Notices.

ABOUT eight weeks since I was called to see a patient of Dr. L.'s. We found her with excruciating pains in the hepatic region, constant vomiting with distress in stomach, in fact could keep nothing down for a couple of days. Enlarged liver easily felt below the costal margin, very sensitive, so much so that we strongly suspected malignant disease. The symptoms were discouraging decidedly, as the doctor had given her nearly every medicine used in hepatic diseases without relief. I suggested "Peacock's Chionia." It was given, and she began to improve, and at this date is as well as usual. It certainly was an efficient remedy in her case, and the result deserves recording.

F. W. BATHRICK, M. D., Battle Creek, Mich.

UTERINE DERANGEMENTS.—I have used Aletris Cordial in my practice for over a year, and to say that I am pleased with it does not nearly express the degree of my satisfaction. Aletris Cordial fills a long-felt want with me. Symptoms attending uterine derangements have always been perplexing to physicians, but with this remedy the trouble vanishes as dew before the rising sun.

L. M. MCLENDON, M. D., Georgiana, Ala.

P. N. DE DUBOIS, M. D., F. R. C. S., of Tallulah Falls, Rabun Co., Ga., September 22, 1896, writes: I have used Papine, Bromidia, and Iodia extensively in my practice, and expect to continue doing so, as these preparations undoubtedly are of great value. I have found your Iodia specially useful in cases of menstrual disorder generally and as an alternative. Papine must of necessity come greatly into vogue with the general practitioner, relieving pain as it does without unpleasant after-effects. It was of great value to me in treating the pain in a female suffering with (incurable) cancer.

THE Dios Chemical Co., St. Louis, Mo., will mail free sample of Palpebrine and literature pertaining to same on application. This product will be found useful in the following forms of external eye diseases:

Simple, acute, catarrhal, venereal, strumous and chronic conjunctivitis, acute and chronic blennorrhoea of the conjunctiva, inflammation of the lachrymal sac, blepharitis, etc. Palpebrine is indicated in all cases where an accurate antiseptic solution of known quality and quantities are required.

Palpebrine is superior in its action to the remedies now in use. It contains all the constituents of Aqua Conradi, as recommended by the renowned professor of the Vienna University, Ferdinand von Arlt (see *Clinical Studies on Diseases of the Eye*, by F. Ritter von Arlt, translated by L. Ware, page 23). But to these are added a number of other agents which will prove Palpebrine to be of much greater value and give it a broader field for action.

We are indebted to the bacteriologists for many things, but they have taught us nothing of more practical value than the lesson that a large number of our minor complaints and a thousand-and-one of our aches and pains, which make life miserable, come from auto-intoxication. The ever present germs in the alimentary tract manufacture their toxins, and these are absorbed much to the distress, if not to the actual danger, of the individual. The good old-fashioned theory that you must "keep the bowels open" if you wish to enjoy perfect health thus finds a scientific explanation in these latter days. It is now simply a question of common sense: Keep the alimentary canal free from the poisons of germ life. You can not do this better than by using California Fig Syrup. It is pleasant to the palate and prompt to give relief.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXII.

LOUISVILLE, KY., OCTOBER 3, 1896.

No. 7.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

OXALURIA.*

BY JOHN A. OUCHTERLONY, A. M., M. D., LL. D.

Professor of Principles and Practice of Medicine and Clinical Medicine, University of Louisville.

The morbid condition designated by this name is characterized by the persistent appearance in the urine of a considerable quantity of oxalate of lime and by the development of more or less numerous and conspicuous symptoms, the latter being subject to great variation.

There are three varieties of oxaluria: In the first there are oxalate of lime concretions in the pelvis of the kidney; in the second concretions have descended into the bladder and have found lodgment in that viscus, or have been formed there; in the third oxalate of lime crystals are found in the urine, and if there are any concretions they are microscopic. The first two varieties pertain to the domain of surgery, and hence are beyond the scope of this paper. In the remarks I shall have the honor to make this evening, I propose to call your attention to the third variety, as that form of oxaluria the physician most frequently meets with. That it is of frequent occurrence all agree, but it must be sought for in order to be found.

As it is only by a microscopical examination that it is ordinarily discovered, naturally enough those who do not make use of the microscope in their every-day clinical work are not likely to recognize it. I am sure that many cases of oxaluria are treated as dyspepsia or rheumatism, and it is not until the ordinary remedies employed in the

* Read before the Louisville Medico-Chirurgical Society, July, 1896. For discussion see page 269.

management of these diseases have failed that efforts are perhaps made at a more thorough investigation and the real trouble is ascertained.

I have records of two hundred and ninety-three cases seen by me in private practice. The cases occurring in hospital or dispensary practice are not available for statistical purposes, for either no record has been kept of them or these records are not accessible.

Etiology. The etiological conditions which produce oxaluria are very diverse. Among them are to be mentioned improper alimentation, overeating and sedentary habits, derangements of digestion and assimilation, lowered vitality from disease, or mental worry and depression. But it will be found that in a majority of cases there exists an underlying tendency to the formation of oxalate of lime even under circumstances when in others, free from such liability, oxalate of lime would be absent from the urine or present only in exceedingly minute and insignificant quantity. This was regarded by Prout as constituting a peculiar diathesis, which he designated as the oxalic-acid diathesis. Its existence has been denied by some others, but Golding Bird and Begbie, among the earlier writers on this subject, and Von Ultzman, Von Jaksch, Cantani, and others agree with Prout, and I have been forced on clinical grounds to adopt the same view.

Age seems to have some influence in the causation of this disease. It is more a condition of adult and middle age than of youth. My youngest case was a girl of eleven years. She had a most intense oxaluria, which had been preceded by scarlet fever, with endocarditis. She died of acute nephritis some months later. Sex does not seem to figure at all prominently as a predisposing influence. Of my two hundred and ninety-three cases one hundred and fifty-seven were males and one hundred and thirty-six were females, but the most severe cases were undoubtedly found among the males.

My attention has often been drawn to a seeming relation between oxaluria and lithæmia. Oxalate of lime and uric acid were often found together in large amount in the same urine. Frequently enough oxalate of lime would under treatment disappear from the urine, but only to be replaced by uric acid in as great abundance. In some instances this was doubtless due to the almost exclusively meat diet adopted, but this explanation was not applicable in all cases.

The alkaline plan of treatment employed by Cantani, which was found highly successful both by him and others, points to a somewhat

closer relationship between these two conditions than is generally recognized. Sir William Roberts' statement that in the laboratory he had found uric acid to yield oxalate of lime may also have significance in this direction.

Symptoms. As the conditions under which oxaluria may arise vary, so it is but to be expected that the symptoms engendered by it should also be subject to great variation both in character and degree. When oxaluria has lasted for some time and has attained a certain degree of severity there is loss of weight which may be marked, and emaciation is not rare. The appetite is fickle, and the bowels as a rule are constipated. Evidences of disturbed and imperfect digestion are frequently observed; these, however, differ considerably in individual cases. The patient is often nervous, irritable, depressed in spirits, hypochondriacal, sometimes in an extreme degree.

One of my cases, a gentleman from Florida, was, when first seen by me, firmly convinced that he had organic disease of the brain and spinal cord. No argument availed to remove this impression, but in a few weeks it passed away along with the oxaluria. Loss of energy, mental and physical, is common. The diminution in strength is quickly enough noticed by the patient, and he complains of speedily ensuing fatigue even after moderate exertion. Impairment of sexual power in the male is common and may amount to impotence, which as a rule is not permanent. Urination is abnormally frequent and is often accompanied by a scalding sensation in the course of the urethra.

Pain and a sense of weakness in the lumbar region is a rather constant symptom. Wandering muscular pains in the extremities are equally constant, and the patient is prone to describe them as rheumatic, often enough having been treated for rheumatism. Furuncles and even carbuncles are likely to develop. When these troubles are marked and persistent it is well to "interrogate the kidneys." In many instances the answer will be oxaluria.

Sir William Roberts has called attention to the fact that the symptoms of this disease are almost identical with those attributed to spermatorrhœa. Under inspiration of some quack publication or irregular practitioner the patient is made miserable in mind and robbed of his money under the delusion that he is suffering from a disease which he has not, while the disease he has is overlooked both as to diagnosis and treatment.

When oxaluria has lasted for any length of time a more or less pro-

found anæmia ensues, and the symptoms incidental to this condition are superadded to those of the original disease.

Prognosis. This is as a rule favorable. Certain reservations must of course be made, as when an ordinary oxaluria is complicated by mulberry calculus in the pelvis of the kidney and the occurrence of frequent and severe attacks of renal colic. This happened in several of my cases. In some instances the liability to the formation of oxalate of lime is very strong, and even after prolonged treatment it reappears in the urine over and over again. I do not here allude to such patients as fail to observe the dietetic and other essential regulations laid down by the physician. Of this class nothing can be expected. When proper medication and diet are faithfully adhered to, where the hygienic surroundings are good, where no complications are present, and the case is one of not excessive severity, it ordinarily requires from four to eight weeks' treatment before the oxalate of lime has disappeared from the urine and the general symptoms have completely subsided. But from this rule there are many exceptions. When an ordinary oxaluria shows evidence of renal concretion or of the presence of vesical calculus the prognosis becomes more serious.

Treatment. This consists in the fulfillment of two indications:

1. To diminish or arrest the excessive formation of oxalic acid in the body.
2. To arrest the separation of already existing oxalic acid in the form of oxalate of lime by the urinary tract.

These indications are accomplished in the first place by dietetic treatment. The greatest importance has been given to the avoiding of all articles of food which contain oxalic acid, the object being to lessen or prevent the entrance into the organism of the preformed acid. Abeles, however, has suggested that the existence of oxalic acid in many articles believed to contain it is rather doubtful, and if present the proportion of acid is insignificant.

Furthermore the lime salts contained in the intestinal canal are always so numerous and abundant that any oxalic acid finding entrance with the food must become speedily converted there into oxalate of lime and excreted with the fæces.

In spite of this plausible argument I have always thought it more safe to avoid such articles as tomatoes, rhubarb, parsnips, carrots, etc., and as suggested by Jenwick to forbid all lime and hard water, substituting boiled or rain water or appropriate mineral waters.

The main object in dietetic regulations must, after all, be to combat the formation of oxalic acid within the body and not to exclude its entrance from without. This was well appreciated as far back as the days of Prout, and has been quite recently and strongly emphasized by Cantani.

To attain the desired end sugar in every form must be rigorously excluded from the patient's food, and starchy food should be reduced to the smallest practicable amount. Cantani found that a majority of the patients suffering from oxaluria gave a history of having been large consumers of saccharine and amylaceous food. The withdrawal of these articles from the diet and the substitution of a more or less strict meat diet was speedily followed by great improvement or cure.

These observations must have been confirmed by others as well as myself, and they are both interesting and important. Emil Pfeiffer has endeavored to invalidate Cantani's results because they were unaccompanied by chemical examination of the urine, but this seems to me rather hypercritical. The proportion of oxalate of lime normally present in the urine is so exceeding small, according to Furbringer two centigrams per twenty-four hours. Where, therefore, crystals in considerable amount are persistently present while characteristic symptoms also co-exist, the diagnosis of oxaluria has been established with sufficient certainty, and the disappearance of the crystals with accompanying symptoms ought to be sufficient evidence of cure.

Furthermore, the chemical test for oxalate of lime is so complicated and requires so much time that it is practically impossible to the greater proportion of general practitioners.

The noxious articles of diet having been ruled out, the patient generally requires an abundance of nourishing food, in which well-cooked meat is the principal constituent. The patient should be advised to drink largely of such water as Silurian or Bethesda water; other waters may also be needed to meet special indications.

In order to promote healthy tissue change these patients ought to spend a goodly portion of the day in the open air with gentle or moderate exercise. The diet is always a vexatious question in these cases, and it is necessary to lay down detailed directions covering as far as possible every contingency. For some time back I have adopted a modified diet table, departing in some respects from that suggested by Cantani.

DIET LIST.

BREAKFAST.

Allowed.	Forbidden.
Coffee, tea, milk (sparingly).	Chocolate, sugar.
One slice white or brown bread.	More than one slice white or brown bread.
Butter (sparingly) eggs, meat.	Cakes, sweets, honey.
Sausage (not fat).	

DINNER.

Allowed.	Forbidden.
Thin soups, meat soups.	Thick soups, potatoes in every form.
Meat (any kind), fowl (any kind).	Bread in every form.
Fish (any kind), game (any kind).	Maccaroni.
Fat (any kind) in moderation.	Rice.
Eggs in every form.	Sweet foods.
Cheese, green vegetables.	Cakes.
Salads, radishes.	Sweets.
Fruits, raw or cooked (without sugar).	Wine and beer.
Water or mineral water.	

SUPPER.

Allowed.	Forbidden.
Meat (every kind).	Sour milk
Eggs, sausage.	More than one slice white or brown bread.
One slice white or brown bread.	Cheese.
Butter, salad, radishes.	Potatoes.
Mineral water.	Wine and beer.

Medicinal Treatment. There are two so-called specific plans of treatment, the first of these, that of Cantani, is alkaline and consists of the following powder, which may be varied by giving a solution as follows:

- R. Natr. bicarb., Gm. 10, 20, 40, -3iiss-3x;
 Lith. carb. efferves., Gm. 5, -3i-gr. xv;
 M. Ft. cht. No. xx. Sig: One powder morning and evening, to be taken in water.
- R. Natr. bicarb., Gm. 2, -3ss;
 Lith. carb. efferves., } Gm. āā 5, -gr. viiss.;
 Kal. carb. neutr., }
 Aquæ font., Gm. 200, -3vi;
 Aquæ anisi, Gm. 30, -3vii.
- M. Sig: Take one half in the morning, the other half in the evening.

Besides these he recommends the alkaline waters of Vichy, Vals, and Baden-Baden. Prof. Emil Pfeiffer speaks very highly of the water of Fachingen, a small German watering-place as yet not very widely known.

The second plan may be designated as the acid plan, and consists in the administration of dilute nitro-muriatic acid copiously diluted after each meal. Under its use the oxalate of lime generally disappears in

a few weeks when its action is assisted by a proper diet. This is the plan almost uniformly adopted by myself, and which I have found remarkably satisfactory.

It is often desirable to combine the acid with the tincture of chloride of iron when anæmia is present. In cases where muscular weakness is prominent, as indicated by backache, etc., the use of strychnia in full dose and for some time will be found particularly beneficial, especially where cardiac asthenia co-exists.

LOUISVILLE.

MODERN GASTROSTOMY FOR STRICTURE OF THE ESOPHAGUS, WITH REPORT OF A CASE.*

BY LEWIS S. M'MURTRY, A. M., M. D.

Professor of Gynecology in the Hospital Medical College, Louisville.

Conspicuous among the achievements of modern abdominal surgery are the great improvements in the surgery of the gastro-intestinal tract. Not only have many altogether new operations been devised and established, but some old operations have been improved and restored to favor by improved methods and a perfected technique. Among these latter is the operation of gastrostomy, whereby a gastric fistula is provided in cases of increasing cicatricial or cancerous stricture of the esophagus, through which the patient may be fed and spared the pangs of starvation.

The old method of direct incision and stitching the viscus to the margins of the parietal incision was practically rejected by the profession and is now abandoned. When the operation, as then done, succeeded, the result was far from satisfactory. The trouble was in keeping the fistulous track tightly adjusted to the tube; under the old method the subsequent regurgitation and leakage through the tube deprived the patient of the desired advantage and inflicted additional discomfort. The food poured into the stomach would flow back through and alongside the tube, so that the patient was not nourished; and the uncleanness and excoriation consequent upon this condition were painful and annoying. And to this the danger of the operation itself was added, a large proportion of cases terminating fatally from septic peritonitis and pneumonia following the operation.

The skill and ingenuity of modern surgeons have now provided

* Read at the June meeting of the Kentucky State Medical Society, 1896. For discussion see p. 263.

several methods of performing gastrostomy which are free from these objections. Moreover modern gastrostomy is now perfected to such an extent that no patient with stenosis of the esophagus need die of starvation, while the operation itself involves but trifling danger when properly performed. These improved methods have placed the indications for gastrostomy upon an entirely new basis. It is no longer admissible to let the patient with malignant or cicatricial stenosis of the esophagus go until fluids can not pass into the stomach; or, as sometimes, until rectal alimentation will no longer suffice. As Meyer puts it, in cases of cancer of the esophagus a gastric fistula should be established as soon as the scales show a steady decrease in weight. In cases of burn of the esophagus gastrostomy and timely dilatation may prevent incurable conditions.

Gastrostomy as formerly performed consisted of a three-inch incision made parallel with the border of the ribs on the left side, from near the median line down to the eighth costal cartilage. The parieties were divided, including the peritoneum, and the anterior wall of the stomach attached by sutures to the margins of the abdominal incision. An area of the gastric surface about one and one half inches long and one inch wide was attached by sutures, and a loose tamponade applied. From three to five days thereafter the stomach was incised, a small opening being made, and a tube inserted. In the mean time the patient was maintained by rectal alimentation. This method is known as Fenger's, the operation having been modified and practiced in 1853 by C. E. F. Fenger, of Copenhagen.

As already stated, the objection to this primitive method of gastrostomy is the almost universal leakage around the tube, rendering the operation functionally inefficient. In consequence the operation of gastrostomy fell into disfavor, and Fenger's method is now obsolete.

Of the several methods recently devised, and which overcome all former difficulties and objections, I shall describe only two, since I am sure one or the other of these operations will meet the requirements of all cases.*

Witzel's Method. This procedure, devised and practiced by Oscar Witzel, was published in 1891, and is in many particulars preferable to all other methods. As a primary operation in cases of burn of the esophagus, wherein timely dilatation of the cicatricial constriction is

*I have omitted detailed description of Von Hacker's method, which on account of ease and rapidity of performance is suited for extreme cases unable to bear other operations. Its field is limited to such cases; its functional results are not equal to the two operations described. Hahn's method is likewise omitted, being inferior to the two methods described.

applied, it is superior to every other method. It has the double advantage of preventing all leakage and of closing spontaneously when the tube is removed and left out. At the same time it is more difficult to perform than the other methods to be described; has an element of immediate danger in opening the viscus prior to stitching the peritoneum, and requires the tube to be worn under the constant supervision of the surgeon, so that readjustment may be promptly made if the tube should be extruded. The operation is thus performed: Fenger's oblique incision is first made through the skin and cellular tissue. A longitudinal incision is then made in the sheath of the rectus muscle and blunt separation of the fibers of the rectus and transversalis muscles

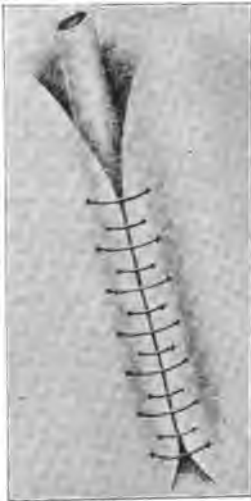


FIG. 1.

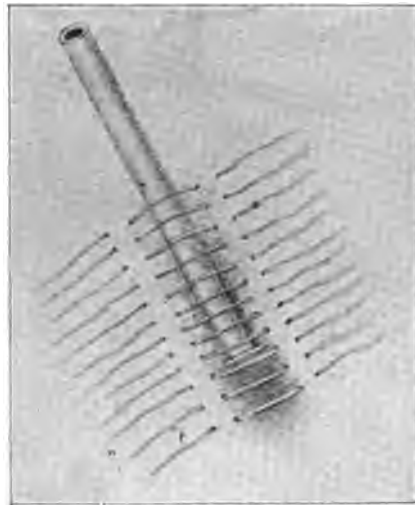


FIG. 2.

parallel to their course. While these are held aside by blunt hooks, the peritoneum is divided obliquely. The stomach is drawn out, packed around with gauze, and incised near the fundus sufficiently to admit a quarter-inch diameter rubber tube. The tube is infolded by Lembert sutures to the extent of about one and one half inches upward in the oblique direction of the external incision, also extending the line of sutures half an inch below the opening into the stomach. (Figure 1). When the sutures are tied the tube will be infolded as shown in Figure 2.

The stomach is then dropped back, and the peritoneum shut off by suturing all around the operative area to the parietal peritoneum. The abdominal incision down to the peritoneum is then closed with silk-worm gut sutures up to the upper angle where a snug opening is left

for the tube. When the blunt hooks are removed from the separated muscles, it will be observed that the fibers of these muscles securely clamp the tube. In cases where Witzel's method has been applied by Witzel, Mikulicz, and Meyer, the fistula has remained pervious for months without regurgitation or leakage, and in one case closed spontaneously when the tube was left out.

Ssabanejew-Frank Method. According to Dr. Willy Meyer, of New York, to whose writings I am greatly indebted, as well as for the illustrations of this paper, Ssabanejew, of Odessa, devised and performed the valuable method, next to be described, in 1890. In 1892 R. Frank, assistant to Albert in Vienna, devised independently and, without knowledge of Ssabanejew's work, practiced the same procedure.

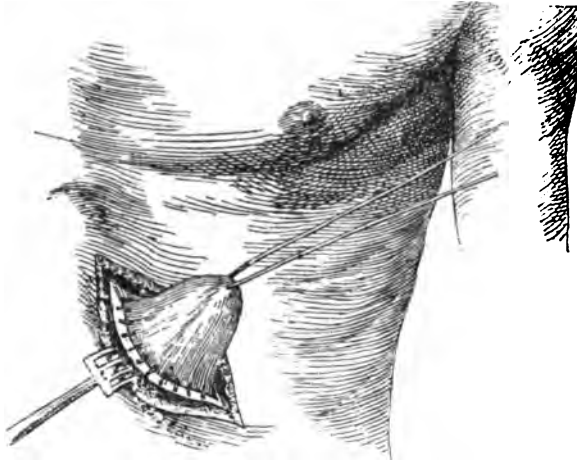


FIG. 3.—Cone of stomach drawn through incision and its base sutured to peritoneum.

This operation is begun with Fenger's incision. The muscles having been bluntly separated in the direction of their fibers the peritoneum is opened. The stomach is drawn forward, and a silk sling is passed through the outer coats at a point near the fundus so as to draw outside a cone of about one and one-half inches. (See Figure 3.)

The edges of the parietal peritoneum are now sutured to the serous coat of the stomach around this cone so as to shut off the general peritoneum. Frank advises that the sutures include the muscles also. A second incision is now made about one inch above the border of the ribs, parallel to the first incision and about one half to three quarters of an inch in length. This incision divides skin only. The skin between the two incisions is raised from the cartilage by blunt dissection,

and the sling thread passed underneath and out the smaller incision, drawing the cone of stomach out. (See Figure 4.)

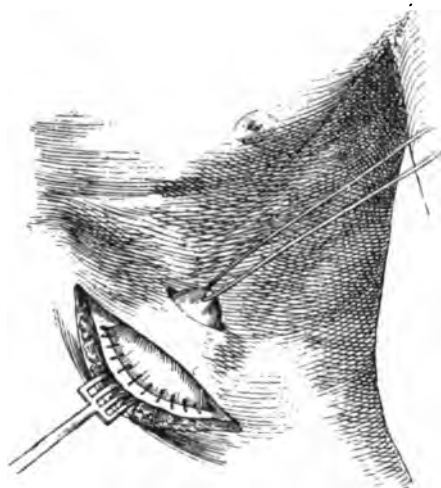


FIG. 4.

The first incision is now closed with silk-worm gut sutures. The projecting apex of the cone of the stomach is now incised for about half an inch, and its mucous membrane sutured to the skin. (See Figure 5.)

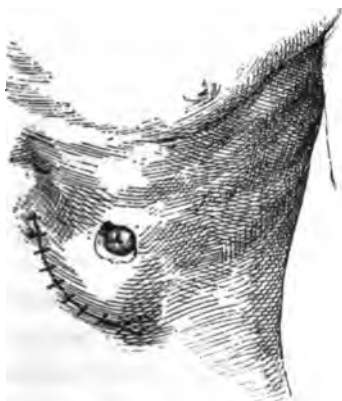


FIG. 5.

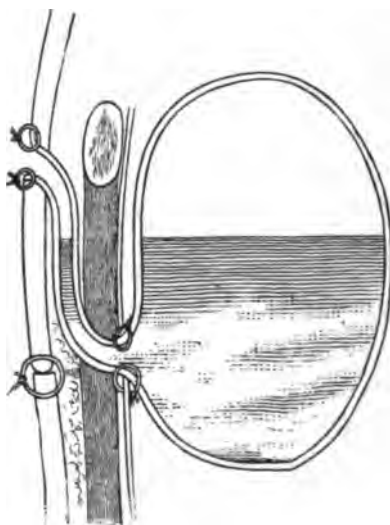


FIG. 6.

and valvular opening into the stomach. The pressure upon the fistulous canal between the skin and costal cartilage, as well as by muscular compression, has proved quite as effective in preventing leakage as in the method of Witzel. In the case appended to this article I depended altogether upon the muscular force for the necessary compression, and with most satisfactory results. The management of the tube after operation by this method is very simple. The tube need not be constantly worn, and the patient can in most instances feed and care for himself.

This operation has now been done by Ssabanejew and Frank, four cases each; Meyer,* three cases; Winslow,† two cases; Max Stern,‡ one case; Thomas S. K. Martin,|| one case; Hupp,§ one case; Edward Martin,¶ one case; and Finney,** one case. In all these cases the results were quite satisfactory so far as the working of the fistula was concerned, and the method merits the highest commendation. In one of Winslow's cases, wherein the operation was on account of cicatricial stenosis, the artificial opening acted efficiently during four months, while instrumental treatment was carried on and the caliber of the esophagus restored. The edges of the fistula were then pared and sutured, and permanent closure was promptly obtained.

Report of Case. Mrs. R., aged seventy, was admitted to the infirmary under my care, January 29, 1896. I had visited her the preceding day at her home, and her condition was indeed distressing and pitiable. She was emaciated, her features were pinched, and her efforts to swallow soup, milk, and water were constant and persistent. A small quantity of fluid would be retained in the sacculated portion of the esophagus above the stricture, only to be rejected in a few minutes. She was suffering intensely from the pangs of thirst and hunger. I at once instituted systematic rectal alimentation and had her removed to the infirmary the following day. Sounding revealed impermeable stricture of the cardiac end of the esophagus, undoubtedly the result of malignant disease.

The following day I did gastrostomy after the Ssabanejew-Frank method above described, with a slight modification. The parietal incision was made parallel to and three quarters of an inch below the costal arch of the left side and to the outer side of the left rectus muscle. The incision was three and one half inches in length, and the

peritoneum was exposed and divided to the same extent. The stomach was readily identified and drawn into the incision. A silk-worm gut suture was passed through the serous and muscular coats, so that a cone of the stomach wall could be drawn out through the incision. Passing a finger along the upper surface of the viscus toward the esophageal entrance, an indurated mass could be felt posteriorly, which interfered with free traction. The traction-suture was placed as near the esophageal entrance as necessary traction would permit. While the cone was firmly drawn into the incision a continuous suture of chromicized catgut was carried around its base, uniting the serous and muscular coats of the stomach to the parietal peritoneum. Silk-worm gut sutures were then placed to close the abdominal incision, these sutures being carried down to but not through the peritoneum, with the exception of two now to be mentioned. At the upper and lower angles of the incision the silk-worm gut sutures were carried through the parietal peritoneum and also through the serous and muscular coats of the stomach. These strong sutures are of essential importance to firmly hold the viscus in place and avoid undue traction on the continuous catgut suture, uniting the stomach to the parietal peritoneum. After placing the silk-worm gut sutures (passing through the entire abdominal wall), but before tying them small strips of gauze were packed around, and the stomach opened. Bleeding was slight from the incised stomach wall, and no outflow of gastric contents occurred during the operation or afterward, although the patient was sick from ether anesthesia.

In consequence of the extent of the disease about the cardiac extremity, the stomach did not yield readily to traction; hence, instead of making the second incision through the skin and drawing the cone of stomach through, I sutured the incision so that the tube would emerge from the opposite end of the incision from the opening in the stomach. That is, the stomach was opened opposite the lower angle of the incision and the tube was sutured over in the parietes and allowed to emerge from the upper angle of the incision. Since immediate union took place, the same valvular course was obtained for the tract of the tube, and retention was effected.

No shock followed the operation, and barring some nausea from the anesthetic the patient was quite as comfortable immediately after the

tube. The quantity given at first was small and was gradually increased. After the third day the patient was encouraged to sit up in bed, half reclining on pillows, in order to prevent pneumonia, which is so often a fatal complication after this operation. There was slight regurgitation through the tube at first, but this soon ceased, and gradually increasing quantities of food and water were retained. There was no leakage at any time alongside the tube. The incision united throughout by immediate union.

At the end of two weeks the patient was up and about her room. She gained strength quickly, and the increase of flesh, as indicated by weight, was marked and steady. The torture of thirst and hunger was



FIG. 7.

relieved immediately. She had much comfort from chewing tender pieces of beefsteak and chicken, thereby gratifying the sense of taste. Owing to the relief from irritation (caused by constant efforts at swallowing before operation), the stricture permitted some fluid to pass during attempts at swallowing. At the end of the third week the patient returned to her home, being quite able, with the assistance of her niece, to feed herself. The photograph (Figure 7) was taken at this time.

For four months the patient got on very well, when the systemic effects of the disease were manifested by emaciation and marked cachexia. She failed thereafter and died during the last week in May. The gastric fistula remained tight throughout, and the relief and comfort afforded by the operation were incalculable.

LOUISVILLE.

COMPOUND FRACTURES.*

BY C. C. LEWIS, M. D.

In the consideration of that class of injuries known as "Compound Fractures" which occur in the human body, the mere cast of factors comprising the simple technicality is rather inclined to deflect us from points marking the real magnitude of the subject.

From this fact, to the novice or uninitiated the impression conveyed by the unqualified description of a fracture with the addenda of injury to the soft parts might be a matter of regret when theory ends and experience commences. A careful consideration of both outlining ideas is far more distinct and impressive: Its description is not contact; its contact not theory, but is the exponent marking the power of him who undertakes its care, and shapes the confidence of both surgeon and patient as to the result to be promised, the realization of which may fix the comfort and usefulness of the patient in after life, and the result may fix the discomfort of the doctor, for it often happens (if I may be allowed the expression) that we have, like the "poor always with us," these limping monuments to our greatness; with measured step they mark the days of our discontent; having once thoroughly equipped one he will serve as a constant reminder of a close and earnest investigation of this class of injuries when they present themselves to the busy surgeon or all-around doctor.

Surgery has so widened its boundaries that it requires great confidence to even survey its domains; its dignified bearings are fully commensurate with public demands, its attainments far outreaching the hopes of its most sanguine followers of early days.

Minor surgery is hardly worthy of touch, and like minor surgery the dressing and care of fractures passes into the hands of doctors in the country and assistants in the city, often on account of a rush of business to which more importance is attached and by which more time is demanded.

I would not like to be understood as entering a plea of culpable neglect upon the part of the surgeon, but I am inclined to think that this class of injuries does not receive the same character of attention as the importance of their nature often demands, especially in the

*Read at the June meeting of the Kentucky State Medical Society, 1896. For discussion see p. 265.

country where the patient is remote from the surgeon, who perhaps sees him but once, and after applying the dressing of the most approved character leaves him in the hands of neighbors, nurses, etc., circumstances arising often rendering the after-treatment of more importance and requiring greater skill than the original adjustment.

In other words, to undertake the care of a compound fracture, see it often and long, for it is investigation that tends to guard against damaging criticism; discard sympathy which only dislodges confidence; regardless of the inconvenience administer an anesthetic. It is this that I wish to urge with few exceptions and amendments, and can not take for granted that every surgeon in the country does this on all occasions that really demand it. In the country the distance to obtain it (coupled with the possibility that the work can be done without it), the want of an assistant to administer it, the protest of a family, the apparent ease of the patient, his expressed preference not to take it, a family history with which the surgeon is familiar, the suspicion of organic heart trouble, all combine to render the verdict "not to administer"—to administer it should be the rule.

After the question of an anesthetic has been settled the next one of importance along the line of investigation and action that we confront is that of amputation, which could not be intelligently settled without an anesthetic, except in those cases where there is complete destruction, when it is the necessary step to any subsequent care.

The question of an amputation is serious to both patient and surgeon. The usefulness of the patient is the most prominent factor in the entire compact, and to simply state that our conclusions in this matter must be drawn from the amount of flesh involved, and the possibility of life being maintained in the part remote from the center of circulation is seemingly giving the unfortunate one the benefit of the formality of a trial without even the privilege of leniency of the court. Every point in the case should be faithfully investigated here before the line of procedure is announced, and the patient given the benefit of the doubt in the broad sense of the word.

There was a time before the days of aseptic surgery that efforts to save proved disastrous, that to-day make success highly possible, from the fact that we have at our disposal such an array of effective means to abridge this part of our work and fortify against subsequent disaster; such means as those pioneers in surgery who set the pace did not possess, notwithstanding this of whom good things must be said, and to

whose credit honors remain. They had doubts, and so have we, for it must be remembered that we are not a unit on the question of asepsis and antisepsis; it may be one, it may be the other, or it *might* be both when it comes to a matter of practice; and I am reminded that it has its analogy in the religious world—its “baptism for the remission of sins,” or otherwise, its purification—its that “cleanliness that is next to godliness.” Be clean, and get relief, or to get relief, and be cleaned; at any event get clean, and the only grounds of success enter as if sacred and with cleanly garments. I hope there are none present whose religious tenets will be at all shaken by the modest comparison. The rule of cleanliness should be applied with all possible emergency clauses in such cases as I am now discussing, or in other words there are no known grounds of safety but this.

It is impossible for me to speak of “compound fractures” but in a general way in an article like this, the scope of which is limited, and brevity is not only recognized as courteous, but compulsory, and the possibility of commendation measured rather by what we did not say than undue utterances—and so it should be.

I have therefore taken as a basis of action or unit of reference those fractures which occur in the lower limb, reserving the right of slight digression, otherwise I might suffer the criticism of recommending the dressing of an inferior maxillary with a tibia splint.

Mechanical devices are so varied and the occupations of men so hazardous that the production of compound fracture is a matter of easy and frequent occurrence; in consequence the demand for up-to-date splints, dressings, etc., is great, and the offerings fully preserve the ratio; to dignify them all with a notice is impossible; to note those of admirable easy adjustment is conservative to say the least of it; brevity will exclude the remainder.

The selection of a dressing to suit the requirements of any case must be made in accordance with the location of the fracture, the extent of injury to the soft parts, the age of the patient, our knowledge of slow bony union, etc., in other words the promptings of the moment; dress the fracture after we see the patient, forget the inventory of the extensive trappings of a modern office, and rather let the comfort of our patient be a guide. I am of the opinion that the plaster dressing offers this with fewer exceptions than any with which I have been made familiar. As regards this dressing several modifications are used, the nature of the injury must determine the selection. If there is

a mere puncture of the skin and subjacent tissue by the sharp end of a fragment, simply enough to class it as "compound," the wound may be closed, aseptically treated, and without hesitancy placed in an immovable plaster dressing and left undisturbed through the entire process.

In the case where the nature of the injury is more extensive, the wound of larger size, lacerated edges, bruised tissues, tumefaction, bleeding vessels, fragments of bony structure wholly or partially detached, the efforts to induce repair must be conducted in accordance with more urgent demands. For holding the fracture in position the Bavarian splint presents more advantages perhaps than any other form of dressing. From the fact that its application is not more difficult than others and by its nature admits of the possibility of being opened and closed at will (an advantage of no small consideration), it likewise affords equal comfort.

In the preparation of a limb to be placed in this class of dressing the first idea is to stop hemorrhage, place the limb on bichloride towels, and wash with a solution of same; first having used brush and soap and having washed away the same, or in other words "prepare the limb as if for amputation," extending the precaution of asepsis so far as instruments, assistants, etc., are concerned, and freely enlarge the wound if at all necessary, irrigating with bichloride solution, trimming away all muscular and other tissue which may be injured to such an extent as to prevent them from living. Remove rough fragments of bone that may be so detached as to retard the process of repair, and drill holes into the remaining in order that they may be fastened together with prepared catgut, silver, or silk-worm gut. Approximate the edges of the wound and again irrigate; powder iodoform over the entire surface involved, cover with bichloride gauze, fasten the same in bichloride bandage passed often around the limb, cover this with bichloride cotton and apply an ordinary roller and finish the dressing by placing the limb in the splint as in simple fracture.

In the case the nature of which I have hurriedly outlined the dressing should be removed in seven or eight days, and if a drainage-tube has been used and the dressing fenestrated, it can be removed and replaced with absorbable bone drain, in which event the dressing may subsequently remain for weeks undisturbed. A point which the surgeon with up-to-date ideas can approach with confidence of success without denying the right of his predecessors to have formed peaceful relationship with the ideas of the benign influence of pus.

There are two locations in the body in which "compound fractures" occur that I can not pass unnoticed. I refer to them, not hoping to outline any special mode of treatment clothed in ideas of novel procedure, but simply call attention to them from the fact that they bear such a close relationship to the appearance in the one case and also the usefulness of the body, the elbow joint and maxillary bone. They are both locations that often receive direct violence by gunshot wound or otherwise, and by their nature require our closest attention and skill to conduct such to a successful termination.

In as far as the dressings for the soft parts are concerned and the line of treatment of the same, they do not differ, outlining aseptic ideas as previously named.

The rule of removing fragments of bony structure should be followed closely, from the fact the danger of ankylosis and necrosis after this is of less magnitude, and this is certainly the point to be obtained in the cases to which I finally call special attention.

As to those means to aid bony union and support the fragments the plaster dressing does not fill the requirements so well as the ordinary angular splint for the elbow, except, of course, where the olecranon is involved.

As to the maxillary, I may mention the interdental splints, wiring together of fragments and the removal of any tooth that may come in the line of fracture, deeming the special description of dressings in detail superfluous on an occasion like this.

Finally, do not investigate without an anesthetic.

Give the patient every possible benefit of a doubt in the question of amputation.

Select aseptic methods of treating the wound.

Use a dressing that will give the patient the greatest comfort, the plaster dressing.

STAMPING GROUND, SCOTT COUNTY, KY.

CHRONIC INTERSTITIAL HEPATITIS, WITH CLINICAL CASES.*

BY R. ALEXANDER BATE, A. B., M. D.

Chief of Medical Clinic and Assistant to the Chair of Theory and Practice of Medicine, Hospital College of Medicine, Louisville, Ky.

Such ancient authorities as Areteus, Celsus, Vesalius, and Morgagni described not only the diminution in size but also the hardness, dryness upon section, the glistening, rough, and retracted surface of interstitial hepatitis. Laënnec first used the term cirrhosis, the color suggesting the name. Virchow, Charcot, Ziegler, Loomis, and many others among the later day authors have thrown much light on its still uncertain pathology.

The anatomical changes in cirrhosis begin with the connective tissue covering the small twigs of the vena portæ and gradually extend to its larger branches. (Loomis.) Charcot describes an insular cirrhosis, the result of irritation proceeding from the bile ducts; an annular cirrhosis, due to alcohol, representing fibrous tissue around the veins; and a monocellular cirrhosis, caused by syphilis, in which fibrous tissue surrounds separate cells.

In the early stage the liver is hyperemic and enlarged. This hyperplasia is due to the formation of new connective tissue which may contract, involving sometimes the whole organ, or the contraction may be limited, presenting both the stage of enlargement and the stage of atrophy at the same time. In the second stage, or stage of contraction, the organ may be reduced two thirds in size and to one pound in weight.

On account of pressure in the hypertrophic stage, or contraction in the atrophic stage, a chronic venous congestion is produced in all viscera from which the blood is emptied into the portal veins, hence enlarged spleen, gastric and intestinal catarrh, etc., with ascites.

The effects of obstruction to portal circulation are partly compensated for by a dilatation of the anastomoses of the branches of the portal system of veins with those of the vena cava. The caput Medusæ is an illustration of this. The anastomosis of greatest importance is that of a vein described by Sappy: It arises from left branch of portal vein, and passes up to the falciform ligament, close to the ligamentum teres, to join the epigastric and inter mammaryveins.

Jaundice will be present when either enlargement or contraction

*Read before the Academy of Medicine October 14, 1895.

causes occlusion of the bile ducts. As marked hypertrophy is less frequent than marked atrophy, functional disturbances are more common in the latter stages.

Briefly, the causes of cirrhosis are: Alcohol in about two thirds of all cases, syphilis, gout, rheumatism, malarial hyperemia, acute infectious diseases, and irritating food, as spices, etc. A visible mechanical irritant has caused cirrhosis, as shown by Welch in his description of pigmented liver of coal miners. Its increased frequency in males is probably accounted for by the increased number of alcoholics among males, as well as their greater use of irritating condiments.

When malaria acts as a cause of cirrhosis it is presumed we have first functional inactivity of the liver, or biliousness, the much abused "hepatic engorgement," and active hyperemia, accompanied by hemorrhoids, splenitis, etc., becoming hypertrophic cirrhosis.

Loomis says in rare instances chronic hyperemia may lead to incipient cirrhosis. Perhaps malarial cirrhosis would be more common if the diagnosis and treatment of malaria were not so well understood by even the laity.

In the Annual of 1894 Ferreira is said to have reported a case of cirrhosis due to paludism. This case, together with four of alcoholic origin, were cured with the iodides, mercury in the form of blue pill, and diuretics.

Sior, in the same volume, reports the case of a young man thirty years of age having hypertrophic cirrhosis with jaundice of nine months' duration cured by the administration of calomel in $\frac{7}{8}$ -grain doses six times daily for three days, repeated after an intermission of three days. The case was discharged after three months' treatment.

The consensus of opinion seems to be for mercurials in the treatment, which is rather palliative than curative. By the use of calomel in small doses, frequently repeated, we get its diuretic, alterative, antiphlogistic, and cholagogue effect, besides the very important condition of antiseptis maintained not only in the alimentary canal but in the occluded bile ducts as well.

It was arranged to present to you this evening an illustration of malarial cirrhosis. An unexpected turn in the course of the case prevents the patient's appearance. This Mr. S., aged sixty-one years, teamster by occupation, father of a large and healthy family, summoned me in attendance September 16th. Patient had "gone to bed to die," as he expressed it.

There was history of bowels being irregular, urination only possible in semi-erect position, with sometimes a sudden stoppage of the stream; nausea, anorexia, dyspnea, and drowsiness with inability to sleep; pulse found to be very good.

Physical examination showed abdominal dropsy, seemingly to its utmost extent, with marked swelling and edema of lower extremities; lessened motion over right side; fluctuation, with tenderness below free border of ribs, was found on palpation; region of hepatic dullness extended up to the right nipple, but was lessened over left lobe; lower region of liver could not be mapped out by percussion on account of a great degree of ascites. Subsequent examination showed it to extend about the width of two fingers below border of ribs.

It was presumed ascites was the cause of hepatic dullness extending as high as the nipple, as it probably produced an upward displacement.

Hemorrhoids were very large and painful, and proved to be the cause of the difficult micturition. Papillomata were removed from the patient's face several years prior to this, but all cancerous abdominal symptoms were negative. Urinalysis showed only ammoniacal degeneration.

Patient had lived in a malarial district about sixteen years. Alcohol, syphilis, gout, acute infectious diseases, etc., were eliminated by the history, leaving malaria as the probable cause. Broad, coated tongue, spleen enlarged, desire to eat, with regurgitation of food and loss of appetite after a few mouthfuls of food had been taken, were characteristic symptoms.

Patient was put upon a skimmed-milk diet, and directed to use hot water enemata at bedtime. Calomel in $\frac{1}{16}$ -grain doses every hour, with quinine salicylate, caffeine citrate, and infusion of digitalis were administered internally. Ascites and edema subsided gradually, but almost completely within two weeks. Patient was up and wanted to go to work at this time, having lost about nine pounds in weight; he was then given cod-liver oil and the green iodide of mercury, and allowed to eat lean meats and toasted bread. He had been on the latter treatment but a week when the ascites became suddenly as great as on the former occasion, occurring in the three days intervening visits.

October 12th patient was placed on calomel and digitalis, and as ascites gradually subsided Warburg's tincture was added. *All symptoms slowly cleared up now, and the patient went about with comfort for several weeks.

* Report concluded September, 1896.

December 23d patient had become as ascetic as formerly. The liver had decreased some since my first examination. From henceforth patient became progressively worse. The symptoms were those ordinary to the latter stages of cirrhosis. Paracentesis abdominis was resorted to several times. The ascetic fluid was peculiar in that it was chylous. Both gastric and intestinal hemorrhages occurred. A chronic peritonitis began, and the patient died in an asthenic condition precipitated by gastric hemorrhage. A *post-mortem* examination was refused.

The original points upon which the diagnosis was made were strengthened by the conclusion of the case, although a favorable prognosis was given when the symptoms yielded to antimalarial treatment.

The diagnosis was made upon the history of sixteen years' exposure to paludism, negative history of alcoholism, syphilis, gout, rheumatism, or irritants from alimentary tract; upon the impaired hepatic circulation, shown to have existed several years by the presence of hemorrhoids; upon the enlarged liver and spleen; by the absence of tumor or cancerous nodules, and upon the apparent benefit of antimalarial treatment.

The course of the disease was classical. Death occurred in nine months after first appearance of ascites.

LOUISVILLE.

Reports of Societies.

KENTUCKY STATE MEDICAL SOCIETY.

Stated Meeting, June 10, 11, 12, 1896, John C. Lewis, M. D., President, in the chair.

[CONTINUED FROM PAGE 217.]

Dr. L. S. McMurtry, of Louisville, read a paper on Modern Gastrotomy for Stricture of the Esophagus. [See p. 247.]

DISCUSSION.

DR. ARCH DIXON, Henderson: In 1889 I did a gastrotomy on a man of fifty years of age for stricture of the esophagus. I did not know at the time it was malignant. I made an incision, drew the stomach out, put a silver pin through it, stitched the serous coat to the abdominal wall and peritoneum, and in thirty-six hours afterward made an opening into the stomach through which the man was fed. For three weeks there was no leakage in the case. The patient

improved daily, but after that there was a leakage which was annoying to me. I used a rubber ball, put it in, inflated it, and fastened it with string. He wore it for a few days, then the ball would rupture. He would call me in and say that the ball had ruptured, and I had to put in another ball. It taxed my ingenuity to shut off this leakage, but by means of a rubber valve on the inner and outer side, with a small string, with slight compression and a little nut on top of it, I was enabled to prevent leakage. In this case I made retrograde dilatation, and found that the stricture was at the cardiac orifice of the stomach. I made retrograde dilatation and dilated the esophagus to such an extent that the man could swallow any kind of food. He died in sitting up in bed from a ruptured blood-vessel when reading a paper. I reported this case to the Mississippi Valley Medical Association at its meeting held in St. Louis. In examining the specimen *post-mortem* it was found to be malignant. In cases of gastrostomy there is nothing which gives the surgeon so much annoyance as leakage, as he is called upon constantly to stop it. The rubber valve I speak of held the contents of the stomach without trouble for three months before he died. The improvement in this operation is a great one, and I am glad to have heard the paper.

DR. H. H. GRANT, Louisville: The only reason I practice retrograde dilatation is simply because I could not dilate from above. I did not do that after leakage began. I do not think it is good policy to make retrograde dilatation with this operation, for the reason we can not get into the stomach to do it. I remember being called to see a patient at the Children's Hospital whose stomach was two thirds out on the abdomen, and it looked like the liver that had gotten out of place. I had a good deal of trouble in getting it back, producing trauma, and I was fearful that the patient would die from trauma of the stomach. I am glad to have heard the doctor's paper, making the operation one of election, and not one of necessity. I would call attention to one advantage of gastrostomy, and that is early operation. Relieve your patient. You will find the stricture can be overcome in a measure, and while the patient could not swallow at all at first, he can in a short time begin to do so little by little, by instituting the bougie treatment, and you will be able to do away with a valvular opening entirely.

DR. L. S. McMURTRY, Louisville: Just a few words in closing. I wish to urge upon those who do this operation to bear in mind the great danger from pneumonia. I do not know how to explain it, but a

large number of cases die from pneumonia after this operation, and it will be found that patients will do a great deal better, if, after recovery from the anesthetic, at the end of twenty-four hours they are put in a semi-sitting posture as much as possible. They are prone to pneumonia or hypostasis in this operation.

DR. DUGAN: I would like to ask Dr. McMurtry if the pneumonia does not pertain to young children rather than to old people?

DR. MCMURTRY: Yes. It obtains in children more than in old people.

Dr. C. C. Lewis, of Stamping Ground, Kentucky, read a paper on Compound Fractures. [See p. 255.]

DISCUSSION.

DR. J. N. McCORMACK, Bowling Green: I have listened to Dr. Lewis' paper with a good deal of interest, and I have very little to say in the discussion of it. I only rise to express my regret that such a paper should be read to empty benches. It seems to me it is hardly worth while for gentlemen to write papers, and then come here to read them to one third of the members of the Society. When the proper time comes, I shall offer an amendment to the By-laws to make the election of officers the last order on the third day of the session so as to keep the members here.

There is nothing in the paper of Dr. Lewis but that deserves the highest commendation. It covers the ground so far as it relates to fractures. I am glad that he insisted upon the administration of an anesthetic in every case. We should also insist upon thorough asepsis in all cases of compound fracture. I have nothing further to say, and desire to give way to those who are more familiar with this subject than I am.

DR. H. BROWN, Hustonville: I rise, not for the purpose of making any special remarks on the interesting paper of Dr. Lewis, but simply to indorse every sentiment expressed therein. I would emphasize the importance of administering an anesthetic in these cases, but each case must be a law unto itself in this respect. In some cases of compound fractures the soft parts are so little involved and the pain is so slight that it is hardly necessary to use an anesthetic, especially in those cases where the stomach is full and not in a condition to receive it. I agree with the doctor that we should give the patient the benefit of a doubt

when we come to the question of amputation. I am very much in favor of the plaster dressing, as there is less objection to it than any other, and it is one that can always be had. In these cases we need soap and water in abundance, and the dressings should be well adjusted so as to maintain fixation, not only of the parts involved but the approximate joints. There is a good deal in the fixation dressing for the treatment of fractures of the femur in children, in that the muscles are kept perfectly at rest, and almost any temporary dressing will maintain fixation.

DR. LEWIS (closing): I have very little to add except to refer to one point brought out by Dr. Brown in regard to the administration of an anesthetic. I inferred from his remarks that it would not be necessary to use an anesthetic in cases where there was a punctured wound of the soft parts. There may be a puncture of the soft parts by spiculæ of bone, and there might be considerable fracture. I referred to the fact that a transverse fracture might lie underneath, and I do not think we could very well determine the extent of the fracture or the amount of injury to the bone without administering an anesthetic.

As to the stomach of the patient being full at the time the patient sustains a compound fracture, I will say that we are not responsible for the amount of food in the stomach. Of course, I would rather administer an anesthetic when the stomach is empty, but we can not afford to wait for the contents of the stomach to be emptied into the world or passed into the intestinal canal. This should not debar us from administering an anesthetic in these cases.

[TO BE CONTINUED.]

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Friday, July 3, 1896, Dr. S. G. Dabney, President, in the chair.

Presentation of Clinical Cases. Dr. W. O. Roberts: This patient is forty-four years of age, a moulder by trade, married, wife living. She has had no children or miscarriages. He had malarial fever in Memphis in April, 1895. About this time he had pain in the epigastric region which continued for one month. In June, 1896, there was a recurrence of this pain, and a tumor was noticed in the epigastric region, which has gradually increased in size up to the present time. It is now about as large as a cocoanut, and a line dropped from the ensiform cartilage to the umbilicus would pass across the middle of the

tumor. He does not know whether or not he has been having fever; the thermometer now shows one hundred degrees. The family history is good. One sister died of tuberculosis. The patient is losing in weight now; his appetite is fairly good; no vomiting; bowels move every day now, but he has had diarrhea several times since the tumor appeared. No blood (so far as he knows) has been passed; no hematuria; no gas in stomach. He sleeps for about two hours, and is then compelled to sit up in order to relieve the pain, sleeping in this irregular manner all night. There is throbbing in the tumor all the time and pain shooting down the left leg. He gives no history of injury and knows nothing that might have caused the tumor.

Exhibition of Pathological Specimens. Dr. A. M. Vance: A week or ten days ago I was called by Dr. Brozowski to see a woman, fifty-three years of age, suffering with obstruction of the bowels. There had been for three days vomiting of what seemed to be stercoraceous matter; she was tympanitic, and had been unable to retain any food during these three days. For eighteen months the patient had been in the habit of vomiting large quantities of fluid every morning. There was so much distension that I could discover nothing, and, taking it to be a case of fecal impaction with probably malignant disease at the pylorus, advised high injections of hot water. She was relieved somewhat by the hot water injections, but vomiting continued several days. She passed this large stone, which, I take it, was causing obstruction near the common duct, finally getting into the duodenum, and passing on down the small intestine to the ileo-cecal valve, and the effort to pass the valve gave rise to pain and the symptoms of intestinal obstruction.

Dr. A. M. Cartledge: I will call attention to a case, successful in some respects, in which the Murphy button was used. I have had occasion to use the button only three times, really giving it a fair trial only twice. One case terminated fatally in two hours from excessive loss of blood before the operation. The other was an anastomosis of the descending colon to the rectum and terminated satisfactorily, the button passing on the sixth day. The anastomotic opening was sufficient to permit of free operations for more than a year. The lady finally died of malignant disease. I operated three days ago upon a fistula following abdominal section, in which the intestines were matted together throughout the pelvis and lower circumference of the abdomen, and I would have abandoned the operation almost at any stage had I known where to quit. I went on denuding bowel and getting perforation after

perforation until finally, down in the pelvis and behind the uterus, there was such a mass of intestine that I lost my bearings. I should have quit here, but there were several perforations. I resected fourteen inches, using a small button on account of contraction of the bowel in the inflammatory mass. In addition to the resection I sewed up seven perforations. The abdomen was closed, the operation having lasted two hours and fifteen minutes. On the third or fourth day there was evidence of some gas and fecal matter passing through the lower angle of the wound, the other parts of the incision having closed by first intention. It is now three weeks since the operation. The fecal fistula is diminishing in size, and she is having natural evacuations. The woman also had a large ventral hernia. I found the retracted fascia and did an operation for ventral hernia also. Her pulse is now from 90 to 98; the evening temperature from 100° to 101°, and except for the fecal fistula she is doing well.

Dr. L. S. McMurtry: The case is a very interesting one, and it has many important lessons connected with it. In the first place it demonstrates that the greatest results are to be expected from complete operations and that the greatest calamities are to be expected from incomplete operations. In the most desperate cases of abdominal surgery I have ever seen the best results have been from complete operations. In cases like this there is a constant pressure to quit in order to avoid death on the table or death from shock. In the next place the case illustrates how much surgery can be borne by the system under an aseptic surgical technique. As I said, it is a very heavy piece of surgery; and, while the result has not been perfect, it is a great deal better than could have been expected, and is a guarantee of the thorough surgical character of the operator's work.

Dr. Ouchterlony: The society has discussed the subject of cholelithiasis in various aspects, and this evening there has been exhibited a very interesting specimen. I have a number of illustrations enlarged from the German plates published by Speidel, of Jena, which exhibit various phases of gall-stone disease. The plates show what progress this particular line of surgery has made. I am indebted to Dr. Lucas for the notes translated and appended to each plate.

The essay was read by Dr. John A. Ouchterlony, subject: Oxaluria. [See p. 241.]

DISCUSSION.

Dr. J. G. Cecil: I am sure that all of those present will agree with me there is very little left for discussion after the admirable resume of Prof. Ouchterlony. I feel myself incompetent to add any thing to the consideration of this paper based upon his extensive experience. Oxaluria is a subject which has interested me greatly, and I feel obliged to the essayist for bringing it before the society this evening. I was glad to hear him say that a microscopical examination was necessary for the certain detection of oxaluria. Those of you who are not familiar with the admirable work of Roberts will be surprised to hear that he says the diagnosis of oxalate of lime crystals can be made from the peculiar way in which they are arranged on the bottom of the glass. As for myself, I have never been able to recognize them with the naked eye. To be sure of our diagnosis we must look for them, and look for them in the proper way. Oxaluria is interesting also on account of its varied clinical aspect. We find cases that may have the crystals in abundance in the urine with a mulberry calculus; and the first time we recognize it will be to recognize the presence of the stone. This is particularly true of children. The symptoms of oxaluria are common enough in my experience without any crystals in the urine.

I am satisfied also that many cases have been treated for other things that should have been treated for oxaluria and cured. This is particularly true of that class of men who complain of what is known as spermatorrhea. While it is true that the trouble is most common in adults it is by no means unknown in children, and we do not recognize it because we do not make a practice of urinary examination in children. In regard to treatment I have almost invariably followed the nitro-muriatic acid plan, and this with bitter tonics and careful attention to diet I have rarely found to fail.

Dr. Thomas Hunt Stucky: Like every thing written by the able essayist the paper is well written, and we have all been instructed by it. I believe it is established, as demonstrated first by Haig and Lyman, that in oxaluria lactic acid is always present. There is one symptom that has been of service to me in the diagnosis of oxaluria, and that is the condition of the tongue. When it presents a furred center and red-den-ed edges you will find in nine cases out of ten oxalate of lime crystals in the urine. In all disorders characterized by microphytic fermentation oxalate of lime is present in the urine. Haig states that they are

found in most cases of persistent neurasthenia and hysteria. It is useless to attempt to add any thing to the treatment as mapped out by Dr. Ouchterlony. I would simply emphasize the presence of gastrointestinal derangement in most cases and the importance of enforcing strict attention to diet. The nitro-muriatic acid has given me best results.

Dr. H. A. Cottell: Dr. Ouchterlony's paper is an interesting and instructive one, and as a study based upon his extensive experience is valuable as an original contribution to the subject. This is an interesting subject to me for the reason also that for many years I have been engaged in urinary work. It is generally agreed that the microscope is essential to a diagnosis—that oxaluria can not be positively made out without it, but one can be tolerably certain of its presence from the symptoms and appearance of the sediment in the urine. I have seen crystals so exceedingly small that they could not be seen with a power less than six hundred diameters. Such crystals are easily overlooked in ordinary examinations. The crystals vary in form from the ordinary octahedral to a little angular dot that could hardly be called a crystal at all and the triangular prism and the dumb-bell. The latter I have not seen more than half a dozen times. A great deal of stress has been laid upon the chemistry of oxaluria. Those of you who are younger remember the old chemical formula, $\text{CO} + \text{CO}_2 + \text{H}_2\text{O} = \text{H}_2\text{C}_2\text{O}_4$. That would look as if the condition were due to defective oxidation, and such I believe it to be. Dr. Stucky's statement as to the prompt appearance of lactic acid in the stomach in oxaluria looks as if the starchy food might sometime take a short cut into lactic acid and the oxaluria be traced in that way.

Dr. Ouchterlony (in closing): I have nothing further to say, as the hour for adjournment has arrived. My object was to present the salient points so as to give the members of the society an opportunity of discussing a subject that is of great interest and practical importance.

SECTION ON OPHTHALMOLOGY: COLLEGE OF PHYSICIANS OF PHILADELPHIA.

A stated meeting of the Section on Ophthalmology was held in the Lower Hall of the College of Physicians on the 17th of March, 1896, Dr. Wm. F. Norris, Chairman, presiding. Present: Drs. Friebis, Hansell, Harlan, Norris, Oliver, Randall, de Schweinitz, Shaffner, and Zim-

merman, Fellows of the College; and Beaudoux, Bromley, Capp, Green, Krauss, Leopold, Lovelace, McGuigan, Mellor, Moorhead, Murdock, Palmer, Posey, Rogers, Schwenk, Shoemaker, Sulzer, Sweet, Tait, Taylor, Veasey, and Ziegler as guests.

Dr. George C. Harlan exhibited a case of traumatic enophthalmus in a five-year-old boy, who five months previously was wounded by the horn of a bull. The right cheek and temple and the lower eyelid were lacerated, and the inferior margin of the orbit was chipped. There was also complete ptosis. At the time of examination the tendo-oculi was found to have been torn away and the lower lid was dragged downward and outward by the action of the orbicularis and the contraction of the cicatrix.

The surgeon who attended the patient at the time of the accident reported that there was considerable orbital cellulitis with abundant discharge of pus from between the lids, but there never was any exophthalmus. He thought that the cellulitis was confined to the lower part of the orbit. At present the eyeball is retracted and has the appearance of being very much smaller than its fellow. The cornea is situated five millimeters behind the plane of that of the other eye. There is scarcely more ptosis than would result from the depression and loss of support of the lid. When the patient looks directly forward the palpebral fissure is five or six millimeters wide. He insists that he sees well with the eye. Though the movements of the eyeball are much restricted, no diplopia can be detected. There is complete inability to look upward beyond the horizontal line, either directly or to right or left. Horizontal movements are normal and the downward excursion is much exaggerated. Dr. George Friebe spoke of his case of traumatic enophthalmus seen nine years ago, in which there was sufficient recovery to manifest but little difference between the two eyes; there being nothing left except a slight doubling of objects when looked at below the horizontal line. In his case there was no incarceration of the extra ocular muscles.

Dr. Francis M. Perkins showed a case of monocular retinal detachment with high myopia.

Dr. Charles A. Oliver gave the clinical history of a case of ciliary staphyloma and excavation of the optic disc following traumatic cataract in a four-year-old boy. The clinical picture of this case of complicated secondary glaucoma was so complete, having been studied from almost what may be termed its very incipency to the final result,

and the varying symptoms evolved from time to time were so at variance with what one would expect in such cases, that it offered itself as a most interesting and a most instructive study of this type of disease.

Unlike similar cases of sudden obstruction to a proper lymph-stream circulation, there remained from the very first, as shown by the fields of vision, and, as afterward proven ophthalmoscopically, an element that may possibly complicate many more cases of the traumatic type of this disease than is at present imagined, and that is retinal detachment. Again, the condition of the vitreous and its peculiarity of opacities, taken in connection with the history of the case, would go far to show that there was a hemorrhage into that humor which most probably might have been recognized ophthalmoscopically had the patient been seen a week earlier. These, with a few though certain evidences of a low grade iridocyclitis, made the case still more atypical.

On the other hand the progressive diminution of the field of vision, the gradual distension of the globe, and the localized tissue-bulgings in the upper ciliary regions, the deep and characteristic cupping of the nerve-head, the reapproximation of the remaining areas of retinal detachment, and the late fixedly increased intraocular tension, all show the certainty of degeneration even in a young and yielding eyeball, when such tissues are subjected to a persisting increased intraocular pressure.

As answer to the vexed question of therapy in such cases, the author will leave this for another and more extended communication, reserving the present brief though detailed account of the clinical history as an interesting and useful exposition of a grouping of symptoms which have been carefully studied, and can be thus employed to illustrate the results of two conflicting contemporaneous conditions produced by traumatism, localized inflammatory reaction and obstruction of lymph-stream circulation.

Dr. George E. de Schweinitz presented a further note on an unusual form of macular lesion following iritis. The patient, a fifty-year-old woman, recovered with a nearly normal sharpness of vision, but with some vitreous opacities from a violent attack of serous iritis. The eye remained comfortable for eight months, when she appeared with a positive scotoma and the ability to see to count fingers only when situated in the periphery of the visual field. In addition to the positive scotoma, which the patient described as appearing "like a dinner plate with a green edge," there was a small absolute scotoma about the horizontal

level. Ophthalmoscopic examination revealed an oval reddish area, giving the impression of a disintegrating hemorrhage and containing in the center several white dots situated exactly in the center of the macular region. Dr. de Schweinitz referred to the unusually distinct macular ring which seemed to indicate that there must be some thickening in the periphery of the hemorrhagic area.

Dr. Oliver exhibited a water-color sketch of a case of unusual sub-macular hemorrhage forming a part of some very curious lymph extravasations in the retina, without any vitreous disturbances, found in the left eye of a healthy sixty-five-year-old woman upon whom he had successfully removed a black cataract by simple extraction some two months previously, the operation being perfectly smooth and the appearance of the interior portion of the eye normal in every respect. The sketch was made for him by Miss Margaretta Washington of this city.

Dr. de Schweinitz described the clinical history of a patient suffering from convergent strabismus of the left eye and a very high myopia, 16 D. Ophthalmoscopically the following lesions were present. A small posterior polar cataract, numerous fine vitreous opacities, and a horizontally oval optic disc of a greenish-gray color. The nerve-head was imbedded in the center of a huge mass of opaque fibers which followed the course of the principal vessels almost to the periphery of the eye-ground, and in all directions, but less markedly downward and to the nasal side. A small patch in the macular region was not covered by the opaque fibers, but was disturbed by superficial choroidal changes. There was almost complete loss of nasal field and of the entire center of the visual field, with exception of a small area to the nasal side of fixation, about ten degrees in diameter, within which the white test object was dimly seen. Colors were correctly appreciated when held in the temporal field. The case was illustrated by a water-color drawing made by Miss Washington.

In the discussion Dr. B. Alexander Randall showed a card-specimen of a case of retained nerve-sheaths in a case that had been sent to him for supposed intracranial disturbances. In this case there was an isolated patch situated in the macular region. Dr. Oliver exhibited the drawing of a case in which the medullation began at the edge of the disc and divided into two comet-like processes extending along the lines of the larger retinal vessels, this case having been seen through the courtesy of Drs. Goodman and Ziegler at the Wills Eye Hospital. He

also spoke of a drawing that was made for him by Dr. Randall, which was one of the most extensive of annular types that he had ever seen. The case occurred in a nine-year-old highly myopic boy who never had had any subjective symptoms of the condition.

Dr. James Thorington, by invitation, exhibited an asbestos cover-chimney with disc attachment for ophthalmoscopic purposes. The original form with the disc attachment he had made two years previously. The present arrangement showed that five changes could be made in the disc. (1) The one-centimeter opening fulfilled all the purposes of the original chimney. (2) The two-centimeter opening permitted greater freedom of movement on the part of the observer, without moving the light. (3) The three-centimeter opening may be used as a source of light for the concave skiascope, or for the ophthalmoscope, otoscope, etc. (4) A round section of cobalt blue glass for the chromatic aberration test of ametropia had been added, as likewise, (5) The perforated disc, with perforations and spaces each 1.45 millimeter to test for astigmatism at one meter's distance. The author stated that he had a new form of contrivance in the course of preparation, which will have a simple shutter with different changes in it, to work up and down in front of the opening in the asbestos chimney by means of cog-wheels. He will also employ a horizontal slip one eighth of an inch wide to exercise the oblique muscles as suggested to him by Dr. Savage, of Nashville, Tenn. Dr. Charles Shaffner strongly recommended the asbestos form of chimney as it radiated but little or no heat, and was always sufficiently cool to handle without burning the fingers. It had been his intention to present one that he had been using for some time, but as he considered that the present form and the one recently brought forward by Dr. M. W. Zimmerman were much better, he had refrained from so doing.

Dr. Thorington showed a new form of perimetric lenses which received its name from the fact that their optical center corresponds to the points of fixation in the fields of vision. The reason given for the recommendation of the lens were, that it gives to the eye that form of lens which is consistent with a normal form of the visual field; it removes the edge of the lens to a sufficient distance that the edge can not be seen to any great degree while the eye is fixed straight ahead, and that bifocal segments can be made much larger. He stated that the increase in weight need rarely exceed the ordinary form of twenty-five to thirty grains; the large size does not attract much attention;

and the cost will remain the same as in the ordinary styles used. Upon account of necessary great weight and thickness, he believed that this form of lens can not be used for cases of aphakia and high myopia, but showed that, as this class of cases constitutes much less than one half of all refraction cases (thirty-seven per cent), the lens will be accepted in the majority of instances.

Dr. Oliver exhibited and demonstrated a series of microscopic specimens, showing the various forms of eyes seen in fish, reptiles, birds, quadrupeds, and man. He showed the marked differences in the conditions of the dioptric media, the varying shapes of the eyeball; the relative positions of the eye in the head of the animal, the adaptations for near- and for far-focussing, the arrangements for increase of the interior illumination, the positions and peculiarities of the nerve structure, and the relationship existing intracranially between the two organs in the aquatic, the terrestrial, and the aerial forms of animal life.

CHARLES A. OLIVER, *Clerk of Section.*

THE PATHOLOGY OF TRACHOMA.—Professor Guarnieri, of the University of Pisa, has published in the July number of the *Clinica Moderna* of Florence a preliminary account of his researches into the pathogenesis of trachoma. In fourteen hospital patients he has found in the detritus obtained by energetic "raclage" of the trachoma granulations some very small round bodies capable of being intensely stained, preferably with a two-per-cent solution of magenta-red in water. They can then be recognized with a magnifying power of only ninety diameters, although they are so small that the diameter of some is between a third and a half of that of a red blood corpuscle. Professor Guarnieri is inclined to suspect that they are of a parasitic nature and belong to the class of blastomycetes, but he has not yet succeeded in cultivating them, and is still pursuing the investigation.—*Lancet*.

EUCAINE.—Gorl (*Therap. Monatshefte*, July), having used a solution of eucaine to anesthetize the vesical mucous membrane in patient with a tumor of the bladder, found that the introduction of the liquid caused slight smarting, and also rather abundant hematuria. This confirms previous observations to the effect that eucaine, unlike cocaine, produces hyperemia at the seat of application. It must, therefore, be used cautiously when there is reason to fear hemorrhage. As regards the local anesthetic effect of eucaine, Gorl confirms from an experience of several cases the statements of other observers who have been satisfied with its power of dulling or abolishing sensation.—*British Medical Journal*.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÆ."

Vol. 22.

SATURDAY, OCTOBER 8, 1896.

No. 7.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.
JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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THE MURDER OF THE INNOCENTS.

Under this gruesome heading the editor of the Journal of the American Medical Association discusses a question of the deepest sociological import, being nothing less than the incentive to criminal neglect of infants held out to the degraded classes through child life-insurance.

As an example of how this pandering to the greed of the parent may result in cruel and criminal neglect of the child, the author cites the following:

In the Lancet of April 20, 1895, a member of the Massachusetts Society for the Prevention of Cruelty to Children said she found families in which children were deprived of the most ordinary necessities of life while money for the insurance of the dying child was put aside. Several other similar instances equally pitiful are given. The cost of infant burial is within the reach of thrifty people, and for the rest, in all countries the community is bound to bury when others can not.

That the picture is not overdrawn, we believe every physician who practices among the classes named will allow; but the unspeakable abuses of the practice as set forth in the body of the article are perhaps known only to the coroner and the physician of public charities.

The editor says :

From an editorial in the *Lancet* in 1895 (i, p. 428,) we learn that of 4,629 children recently subjected to cruel treatment, 1,237 were insured. Another editorial in the *Lancet* (1895, i, p. 166,) on infant neglect, insurance, and mortality, among other things says: An unfortunate infant, whose death was recently investigated by the coroner for the West Middlesex district, might have been saved by medical aid (which might have been had for a mere pittance), but the parents claimed they were unable to pay a physician any thing, yet the insurance premium on the child had been promptly paid up to its death. Facts like these sicken the public conscience. The *Lancet* calls for drastic reforms, and says the insurance should only be for an amount of the bare cost of the funeral arrangements (which is very cheap in England compared to our funeral rates, we believe). The same editorial urges that evidence of criminal neglect or mismanagement should disqualify parents even for the small sum insured. This seems to us very clever, as it shifts the burden and expense of proof on the interested corporation, who would likely be more rigorous in their search for evidence exempting them from payment of the policy than the municipal authorities or ordinarily interested authorities.

In May, 1895, Sir Richard Webster read in the House of Commons a bill providing for the maintenance and encouragement of the mutual benefit principle in such insurance, limiting the sum insured to an average almost as low as that of the friendly societies, £2 (\$10) up to ten years of age. This bill also entails upon physicians the duty of inquiring as to the fact of insurance before granting a certificate of death, and a like service is required of the register. It allows a child to remain under the protection of this act until sixteen years of age. The *Lancet* says: "We are aware of no present limitation except the inability to pay the premium, and the average of £4 (\$20) and a maximum of more than twice this sum is not uncommon, while payment in some clubs may be made partly in spirits. It is significant also that willful neglect of infants, according to a recent return, has been shown to be much more common under the non-mutual system" (that is, those clubs not organized by workingmen for their mutual benefit). We know nothing relative to the ultimate disposition of this act, and are not aware of any legislation in Great Britain limiting infant insurance. According to the *British Medical Journal* (1895, i. p. 291), the reports of the Select Committees on Friendly Societies, 1875 and 1888, contain a large amount of information upon this subject.

Francis Vacher (*Lancet*, 1895, i, p. 254,) suggests that legislation should establish a

As to our own country, affairs are in a chaotic state. In 1895 a bill was reported to the Massachusetts legislature providing that no life insurance company shall issue a policy upon the life of any child under ten years of age, living in that State. The penalty was fixed at \$100 for each offense, the law to come into force September 1, 1895. Whether the law ever came to vote or not (probably not in these days of "politics") we do not know, nor whether other States have attempted similar regulation. Medical men in charge of the medical departments of life insurance companies should bestir themselves, both as officers and members of society, to bring about judicious and needed legislative reform.

Another cause of infant mortality is overlying. It will doubtless surprise even physicians to learn that one thousand children are each year killed in London alone by this careless (or perhaps often intended and criminal) custom. Yet such is the estimate of a London coroner. From an editorial in the *British Medical Journal* (1895, i, 36,) we excerpt:

"There are sad sides to a Merry Christmas, and not the least sad of these this year has been the sacrifice of infant life from overlying. On December 27, 1894, Mr. Braxton Hicks held five inquests on the bodies of children who had died while sleeping with their parents, the cause of death in the majority of cases being suffocation. The coroner said he could not persuade parents to get cots for their children, and that a thousand infants were overlain in London alone every year. The matter is extremely serious. Perfectly healthy children are sacrificed to the bad habit of making them sleep with their parents. It is perhaps difficult to draw the line and to separate thoughtlessness from carelessness so gross as to be criminal, but Liverpool statistics showing the enormous frequency of deaths from overlying on Saturday night points to the fact that the carelessness is gross, and that unless drink be accepted as a general excuse for crime, the action is in a large proportion of cases criminal. Mr. Braxton Hicks announced that he would make it a rule in all future inquests of this character to disallow the expenses of the parents, a course which he adopted in each of the five cases before him. The fight against preventable diseases is hard enough, but it seems harder still to prevent the effects of carelessness and folly."

Certainly such practices call for governmental surveillance and interference. It is a sorry fact that in spite of all our recent brilliant hygienic and therapeutic achievements the statistics of infant mortality are all still appallingly high. The causes, we fear, are not far to seek, and will doubtless be found largely in child murder through overt act and criminal neglect.

In this connection the editor pays his respects to the wholesale slaughter of the innocents through criminal abortion and baby farming. He says: "In every city there are men, either with or without a

medical degree, who make a profitable business by murder through abortion. There are many reasons why these criminals can not be brought within the reach of the law, the principal of course being the inability to secure evidence against them. Their 'patients' will not tell, but the evidences of their work are known to every gynecologist. One thing is, above all things, certain: There should be compulsory inspection and registration of all 'still-born' infants. . . . We would urge upon our general medical associations and societies the duty of promoting such badly needed legislation. They might also profitably institute investigation and control of the disgustingly much-advertised lying-in institutions where, 'for a consideration,' infants after delivery are 'supplied with homes.' "

Amen, Mr. Editor. The depth and the rottenness of the rubbish heap which your inquisitorial pole thus scratches is not so much as suspected by those who have the good of humanity at heart. When the magnitude of the evil becomes known there will be an uprising and an overturning that will mark an epoch in moral hygiene.

Notes and Queries.

"THE UNRECOGNIZED CONSULTANT."—Under the above heading an American contemporary pays a just tribute to the work of the pathologist and of the bacteriologist, who, it considers, should be recognized as consultants of a high order. There is no need to point out in how many instances the whole future treatment and well-being of a patient may be influenced by an expert opinion as to the presence or absence of tubercle bacilli in sputum or the nature of a morbid growth. While the practitioner, general or consultant, should have sufficient knowledge of these subjects to use them in his daily work, he may have neither the time nor conveniences, nor perhaps the experience, for carrying out the requisite examinations, which must of necessity, in the majority of instances, be handed over to one who has devoted himself to such work. The clinician must constantly make use of the results obtained by the scientific worker, for whose opinion—on which so much depends—some adequate return ought to be made. Yet how often does the successful consultant, while himself receiving a handsome reward for his services, ask a junior colleague or friend to "just examine this for me and let me know what you think of it," without ever dreaming of offering a fee for the opinion, which may have been arrived at only after a considerable expenditure of time and trouble.—*Lancet*.

EXPERIMENTAL NEPHRITIS.—Pernice and Scagliosi (*Virch. Arch.*, Bd. 138, p. 521,) give a short account of the histological appearances they found in the kidneys after injection of anthrax bacilli, *b. pyocyaneus*, *staph. pyog. aureus*, and *b. prodigiosus* into the blood. As the authors found similar alterations after injection of the respective toxins, they conclude that the toxic products of bacteria also lead to nephritis, and not only the simple passage of the bacteria through the kidneys in process of excretion from the body.—*British Medical Journal*.

POISONING BY CHLORATE OF POTASH.—Feller (*Med. Corr. Bl., Stuttg.*, Bd. lxvi, No. 22,) relates that a nervous but otherwise healthy woman, suffering from heartburn, took by mistake for bicarbonate of soda a heaped teaspoonful of chlorate of potash, and again half an hour later the same quantity. She was soon seized with violent vomiting and severe abdominal pains, especially about the kidneys, followed by strangury and anuria and cyanosis of the extremities. Her skin was cold; her pulse almost imperceptible; the heart's action irregular; respiration slow; but her intelligence was unaffected. Under artificial warmth and cardiac restoratives the pulse improved, and the next day she passed a small quantity of highly albuminous bloody urine after severe nephritic colic. She could retain nothing on her stomach, but was given nutrient enemata, and on the third day the urine, though still scanty and passed with pain, was less albuminous, but the heart's action remained irregular. On the eleventh day, against the doctor's orders, she got out of bed, fell down insensible, and very soon expired. No necropsy was permitted.—*Ibid.*

NEURASTHENIC ANGINA PECTORIS.—Rendu describes (*Journ. de Med.*, June 10, 1896,) this condition. A man, aged forty, of robust appearance, notwithstanding he had suffered from typhoid, malaria, and yellow fever, but whose health for the last five years had been good, was attacked by influenza. After this he began to suffer from peculiar attacks consisting in a kind of crisis arising in the little finger, extending up the arm, and finally becoming more marked, accompanied by feeling of oppression and agony, with, on some occasions, syncope. After a short period in hospital these attacks became somewhat better, but returned to recur daily. There were no physical signs of either heart or lung disease. Rendu considers the diagnosis in this case one for reflection as to whether it were a case of true angina pectoris or not. In the case in question, as there were no signs of cardiac affection, as angina is uncommon up to the age of forty, and as the pain began peripherally, the author was rather inclined to deny its being true angina pectoris. The previous history of influenza would also, he considers, be in favor of the less grave condition; and as the patient also suffered from headache, sleeplessness, and dyspepsia, the conclusion came to was that the case was simply neurasthenic. On these grounds the man was treated, with the result that the attacks rapidly subsided and the general health was restored.—*Ibid.*

THE AMERICAN PRACTITIONER AND NEWS

"*NEC TENUI PENNÂ.*"

VOL. XXII. LOUISVILLE, KY., OCTOBER 17, 1896.

No. 8.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

HYDATIFORM DEGENERATION OF THE VILLI OF THE CHORION; A CASE, WITH REMARKS.

BY E. J. KEMPF, M. D.

Case. Mrs. B. consulted me concerning excessive vomiting, which was causing her great distress and debility. Her menses she had regularly and up to three weeks ago. She confessed to having used preventive means against pregnancy until the last four weeks, when her husband came to the conclusion no longer to sin against nature. This incident made it possible for her not only to suspect pregnancy, but also to determine the time of its commencement, on or about June 16, 1896.

During the next six weeks I gave the woman the different remedies usually prescribed for vomiting of pregnancy, also directed tonics, nourishing food, and rest, but all failed to give the patient the least relief. The vomiting gradually grew worse. She vomited food and medicine, and could keep nothing on her stomach. At times the vomit consisted of blood and mucus. The urine was acid, high colored, scanty, and passed with difficulty, specific gravity 1028, albumin, pus cells, bladder epithelium, and no casts.

During the ninth week of pregnancy a uterine hemorrhage came on, which lasted about three or four hours, to which the woman paid no attention, as she thought that perhaps her menses had returned,

and if so she probably would get better. For several days she felt somewhat relieved.

A week later the woman awoke one morning and found herself lying in a pool of blood. Becoming alarmed she sent for me. I found that the hemorrhage had ceased, that the woman had no pain, that the cervix was closed and neither dilatable nor softened. I found by abdominal palpation that the womb reached to the umbilicus, and was of the size of a five months pregnancy. I could not make out the fetus either by palpation, auscultation, or by ballottement.

There being no immediate danger, and not being able to make out the diagnosis positively, I decided to wait for further developments. The woman was instructed to remain quiet in bed, and salines were ordered. A nurse was hired to watch the patient.

During the following night I was hastily called, as another and more dangerous hemorrhage had come on without any warning whatsoever. Such severe hemorrhage I had never seen before. After quickly cleansing my hands I found upon vaginal examination that the cervix was open just enough to admit the tip of my index finger—the cervix very rigid and undilatable. By pushing the finger through the cervix and bending it a little, I found that the finger acted as a perfect tampon, arresting the profuse hemorrhage completely.

This tamponing with the finger I kept up for half an hour, when Dr. Brannock arrived and assisted me. We tamponed the vagina with iodoform gauze and borated cotton, and gave the woman a teaspoonful of ergot and twenty drops of tincture of digitalis, which was repeated in an hour. The hemorrhage ceased, and very severe labor pains came on. To ease them somewhat we gave a hypodermic of morphine and atropine.

After five hours the tampon was removed. From the cervix protruded a mass that to the touch felt like a placental mass. My finger penetrated the mass and I peeled it out of the vagina. Imagine our surprise to see a handful of hydatiform cysts. Reintroducing my finger I peeled out more of the cysts, and continued this, making external abdominal downward pressure upon the uterus until the uterus was empty. We knew now that we had to contend with a case of hydatiform degeneration of the chorionic villi.

There were three pints of the hydatiform cells, and among the mass we found a somewhat macerated fetus. A small mass that I took for part of the placenta was also discovered. A vaginal injection of hot corrosive sublimate solution, 1 to 10,000, was now given, and the woman

was made as comfortable as possible. Ergot, digitalis, morphine, salines, and good food were ordered to be given as required.

The patient had a quick and feeble pulse, and an evening rise of temperature, 103° F., for several days, and as long as this lasted the vaginal douches were given twice daily. The vomiting ceased entirely, the albumin disappeared from the urine, and the patient gained strength rapidly. She now made an uninterrupted recovery.



FIG. 1.



FIG. 2.

FIG. 1. A chorionic villus—microscopic (after Krapf).

FIG. 2. Hydatiform degeneration (drawn from the specimen).

Remarks. This affection is called vesicular mole or hydatiform degeneration of the villi of the chorion. Its etiology and pathology are, as yet, not thoroughly understood. The causes are thought to be syphilis or tuberculosis in the mother or the father, or some local uterine disorder in the mother. May not the prolonged prevention of pregnancy in this case have set up a peculiar inflammatory condition in the uterus, which in turn caused a myxomatous degeneration of the chorion?

Vesicular mole is supposed to be a dropsical condition of the villi of the chorion. The vesicles are of different sizes and form groups connected by pedicles. The fluid contained in the vesicles is colorless, transparent, liquid as water, and containing albumin in solution. If the mass is left standing for a day or two the contents turn to a reddish color and the vesicles break up. I present two sketches that may

explain how the diseased chorionic villi degenerate into the hydatids that form the vesicular mole. The villi partly consist of myxomatous connective tissue, and the hydatids are a myxomatous degeneration.

Though the disease is a rare one—one author stating the average occurrence to be one in 20,000—it may happen in succeeding pregnancies in the same woman. The disease frequently causes death by perforation of the uterine walls, sepsis, hemorrhage, exhaustion, and sometimes from ill-understood pernicious anemia.

The most important diagnostic signs are a too rapid increase of the size of the uterus, hemorrhage, escape of some of the hydatiform vesicles, either whole or broken down, pernicious vomiting, unexplainable, serious weakness and anemia, and albuminuria. The albuminuria is not mentioned in the books to be a general symptom, but it is my belief that it will be constantly found if looked for. Not being able to make out the fetus in such a large uterus should give rise to a suspicion of the disease.

As soon as a diagnosis can be made the uterus should be emptied of its contents. The treatment, however, must be cautiously undertaken on account of the irregular and vast dilatation of the uterine walls, which are thinned out rather than enlarged. Forcible manipulations, either with the finger or the curette, may produce rupture or perforation. Dilatation with tents or the steel dilator is contra-indicated; it should rather be brought on by means of tamponnement or of Barnes' dilators. Uterine injections after delivery should be neglected unless absolutely essential. Sepsis should be guarded against by thoroughly cleansing the hands and taking the usual precautions of this antiseptic age. If hemorrhage is severe after delivery of the mass, packing of the uterine cavity with iodoform gauze would probably be less dangerous than swabbing the cavity with a solution of subsulphate of iron, as one author recommends. Ergot, digitalis, morphine, and atropine, if judiciously used, will, I think, prevent serious hemorrhage after the uterus has been emptied.

JASPER, IND.

THE CARE OF PREMATURE INFANTS AFTER INDUCED AND ACCIDENTAL LABORS.*

BY R. B. GILBERT, M. D.

Clinical Professor of Diseases of Children and Demonstrator of Anatomy in University of Louisville.

Recent statistics of well-regulated maternity hospitals show that about 20 per cent of infants born at the sixth month have survived; of those born at the seventh month, 35 per cent; at the eighth month, 85 per cent. If the statistics of such cases occurring in private practice were collected, they would show a much higher rate of mortality.

The prevailing opinion among the laity, and I may say among the doctors too, in this section of the country, is that any infant born before the seventh month is doomed to die, and little or no effort is made to save it. "Seven-months'" babies are usually considered viable, and the usual attention, such as a full-term child should receive, is accorded them; and if the birth happens to occur in warm weather the infant most likely will live, but if born in cold weather the chances are that it will die. The chances for life of an eight-months' child are much better than that of a seven-months' child, though we often hear the expression of a popular opinion that an "eight-months' child is not as apt to live as a seven-months' child."

For many years it has been my custom, and I dare say it has been the custom of most of the Fellows of this society, in caring for those frail little creatures who, from necessity or by accident, like Richard, were "brought before their time into this breathing world scarce half made up," to turn them over to some old woman's tender mercy, admonishing her to do the best she could for them, and at the same time expressing the opinion that the children would not live. A few days of dosing and overfeeding will usually suffice to verify the doctor's prediction, and the family preacher is called in to close the scene, which he does usually with the consoling quotation: "The Lord gave and the Lord hath taken away; blessed be the name of the Lord!"

A human life, though it may begin prematurely, is none the less valuable from a scientific standpoint. It therefore becomes the duty of the physician to put forth every energy in efforts to save that life. Indeed, a physician is inexcusable if he allows a premature infant to die from sheer neglect.

* Read at the June meeting of the Kentucky State Medical Society, 1896.

The period of viability has been customarily fixed by teachers in obstetrics at twenty-eight weeks. But, as a number of premature infants at twenty-four weeks have been successfully raised, it would be a good rule to treat every child as viable that is able to breathe and cry at birth.

To preserve the life of a premature infant until the time which would have completed the term of pregnancy requires that we pay especial attention to several points, as follows:

First: The maintenance of bodily temperature.

Second: Proper feeding.

Third: Prevention of injury by handling, etc.

The temperature of a premature infant should be maintained, as nearly as possible, to that of the fetus in utero, which is about 100 degrees Fahrenheit. The fetus while in utero is surrounded by the amniotic fluid and its sac, where a uniform temperature is maintained by the constant flow of the maternal blood through the placental circulation. The great difficulty of maintaining the infant's bodily heat in the external air is the constant though imperceptible evaporation of moisture from the surface of its body and extremities. This evaporation goes on, no matter how closely it may be wrapped in cotton or clothing. The surface of the skin is thus chilled, especially that of the fingers and toes, and the blood as it makes its rounds to the surface is cooled, and, returning to the heart in this chilled condition, it is sent to the lungs, where it is imperfectly oxygenated by their feeble expansion. The life current thus gradually becomes cooler and cooler until life is extinct—the child dying without a cry or a struggle.

In the month of October I was called twelve miles out in the country to see a premature infant, in consultation. On my arrival I found a trained nurse holding the baby wrapped in cotton batting, and sitting before an open fire. She assured me that the baby was "sleeping nicely," but on examination it was found to be not only dead, but cold and stiff. So quietly had it passed away that they were not aware of its death.

The best means of keeping up the animal heat in a premature infant is by an incubator, or some arrangement by which a uniformly heated atmosphere surrounds the infant and side drafts are avoided. There are several kinds of incubators, notably those of Tarnier and Crede, which have been used with more or less success in the European hospitals. They are somewhat complicated and expensive machines,

and are not well-adapted to use in private practice, especially among people of moderate means. I saw an improved Crede incubator in the Harvard College Exhibit at the World's Fair, which I examined with a view of purchasing, but the price (\$250) placed it beyond my reach.

Having occasion to need an incubator about eighteen months ago, in the case of a lady with deformed pelvis in which I intended to induce labor prematurely, I designed and had constructed an incubator of tin, which is inexpensive and works to my entire satisfaction. I have used it now in five cases, saving three infants out of the five.

My incubator consists simply of two tin boxes, or compartments, an inner and an outer, with a two inch space between them for holding warm water. The inner box is for holding the child. The water is heated by an ordinary coal-oil lamp placed under a small copper water-box that connects with the water-chamber by means of two small pipes, one placed above the other. The hot water is thus forced to circulate around through the chamber. The flame of the lamp is regulated so as to maintain the proper temperature. The top of the box is open to allow the infant free air and light overhead.

To meet an emergency in an out-of-the-way place, one may improvise an incubator by using any kind of tight box, packing it inside with cotton wool, under which is placed bottles filled with hot water.

Feeding. Next in importance to maintaining the animal heat is the proper administration of nourishment. It goes without saying that the best food for any infant is the mother's milk. The milk from a healthy woman, whose baby is under six months of age, will agree with a prematurely new-born infant. If the infant is too weak to swallow the milk it can often be made to swallow by dropping the milk into its pharynx, using an ordinary medicine dropper. If this method fails, it may be fed by a method known as "gavage." A small rubber catheter, cleaned and sterilized, is dipped into the milk, then passed carefully down the esophagus to the stomach, which it will reach at about six inches. The milk is gradually and carefully introduced through the catheter by means of a glass syringe, about two drams being administered at a feeding. The milk should be fresh from the breast, and the instruments warmed. Once in every three hours is often enough to feed the baby.

Should it be impossible to procure mother's milk, the best substitute is cow's milk prepared after the following formula. It is the food

we use in the obstetric ward of the Louisville City Hospital with most gratifying results :

Sweet milk (fresh),	3ii;
Cream (fresh),	3iii;
Warm water (sterilized),	3x;
Sugar of milk,	3i;
Common salt,	Di.

For the premature infant this should be diluted by the addition of one ounce of lime-water. This is very nearly the same as the formula given by Prof. Rotch in "Keating's Encyclopedia of Diseases of Children."

I wish to say just here that this mixture prepared from fresh articles and in clean bottles is far superior to any of the manufactured articles of infant's foods that I have ever tried. It is less liable to derange the stomach and bowels, and its use long continued will not cause scorbtus, which sometimes occurs from using some of the artificial foods with which the markets are flooded.

Injury by Handling. Immediately after the birth of the infant it should be anointed with warm hog's lard, which is preferable to olive oil or vaseline. The lard saponifies the alkaline vernix caseosa, which must be wiped off gently with a soft cotton napkin, after which a second inunction is applied. No water should be used at the first cleansing. The infant is now wrapped in previously warmed fine cotton batting, and at once placed in the incubator, which should be well padded with cotton and already heated up to a temperature of 100° Fahrenheit.

The premature infant should not be bathed with water until it is three weeks old. A soft old cotton cloth dipped in hot water may be used to wipe off the buttocks only. Layers of absorbent cotton may be placed under it to receive the urine and fecal discharges, which can be withdrawn without disturbing the child.

A brief report of the five cases treated will practically illustrate the subject:

CASE NO. 1. Mrs. B., white, and married, having a deformed, almost typical Naegele's pelvis, with a narrow outlet, and who had been delivered two years previously of a dead and mutilated child at full term, was delivered by me October 9, 1894, by induced labor, at the end of the twenty-seventh week of gestation, of a male infant weighing three and one quarter pounds, and measuring fourteen inches in length. The nourishment in this case was mother's milk, furnished by a neighboring lady whose baby was five months old, the newly-born being fed two

teaspoonfuls every third hour through an ordinary nipple-shield. Its own mother gave plenty of milk after the fifth day. The incubator was kept at a uniform temperature of 100° Farenheit for the first two weeks, then the temperature was gradually reduced to 98°, at which it was maintained. The child thrived, and was strong enough at the end of two months to be handled as infants are ordinarily handled at full term.

CASE NO. 2. Mrs. G., white, and married. Labor was artificially induced at the end of the sixth month, on account of cicatricial stricture and former atresia of the vagina. It was safely delivered by Prof. Turner Anderson before the class, at his clinic in the University of Louisville, on the 14th day of February, 1896. The infant weighed four pounds and measured fifteen inches. It was immediately turned over to my care, and it received the same treatment, and was placed in the same incubator as in Case No. 1. It thrived uninterruptedly.

CASE NO. 3. Mrs. J., white, and married. Labor brought on accidentally by lifting a heavy weight at the beginning of the seventh month. She was safely delivered by Dr. I. of a male child weighing six pounds. My incubator was sent for, and the baby placed in it fifty-four hours after birth. By that time its extremities had become thoroughly chilled, notwithstanding it was wrapped in blankets and kept before a hot fire. It survived only two days.

CASE NO. 4. Mrs. B., the same woman mentioned in Case No. 1, was again delivered February 23, 1896, by induced labor at the end of the sixth month. The labor was easy; the child weighed four pounds, and was apparently healthy. It was incubated and fed as in Case No. 1. It seemed to do well for three weeks, excepting that it was decidedly jaundiced. About the fourth week large abscesses developed in each submaxillary gland, one of which I opened externally, the other pointed and opened spontaneously into the mouth, causing its death in the fifth week.

CASE NO. 5. Mrs. G., white. Labor induced at the end of the sixth month, on account of contracted pelvis with narrow outlet—she having been delivered three years previously at full term of a dead and mutilated child after twenty-six hours of hard labor, terminated by the use of forceps. The labor in this case was short and easy, occurring on the 5th day of March last. The infant weighed four pounds. It was anointed with hog's lard and placed in the incubator and treated as in the above described cases. This infant has prospered from the start, and is now three months old and weighs thirteen pounds.

LOUISVILLE, KY.

ANTITOXIN AND INTUBATION.*

BY S. G. DABNEY, M. D.

Among the recent additions to our knowledge in regard to antitoxin are (1) that in a few very rare cases its administration has been almost immediately followed by sudden death; (2) by improvement in its manufacture the strength of the serum has been greatly increased and the quantity to be injected correspondingly diminished; (3) there is a general consensus of opinion that it is of special value in laryngeal cases, and (4) more recent statistics indicate that it is not always a specific even when administered on the first day of the disease.

Before considering these points separately I will briefly review a little of what has appeared in the journals in the last few months on the subject of antitoxin. Few have written in opposition to it, but these few opponents we will first consider.

In New York Dr. Joseph E. Winters is still conspicuous for his disapproval of antitoxin. He bases his arguments on the following claims: First, even when used on the first day of the disease in the Willard Parker Hospital the mortality was 10 per cent. Second, that antitoxin exerts no good effects on heart or temperature. Third, the claim that antitoxin limits the extent of membrane or hastens its disappearance is not borne out by clinical experiments. Fourth, that antitoxin exerts a destructive influence on the red blood corpuscles, and is frequently followed by pneumonia of a very severe type.

Dr. O. B. Douglas, of New York, also disapproves of antitoxin. Struh, of Chicago, argues that antitoxin is useless, and that the improvement which has followed its administration was due to the discontinuance of drugs formerly used, and to the report of a much larger number of cases, most of them of a very mild type. There can be no question that this latter point of Struh's is well taken and allowance must be made for it in statistics. Elmer Lee, of Chicago, holds the same opinion as Winters. Stickler, of Orange, N. J., thinks antitoxin valuable ordinarily, but contra-indicated where there is great exhaustion. Lenox Browne, the eminent English laryngologist, in his recent work on diphtheria, holds that the antitoxin treatment is still *sub judice*.

Against these few observers, the most eminent of whom confess themselves in doubt, we have overwhelming testimony in favor of the

*Read at the June meeting of the Kentucky State Medical Society, 1896.

value of antitoxin in diphtheria. So much has been written on the subject that I will mention only a few of its enthusiastic advocates. Casselberry, of Chicago, claims that antitoxin has changed his diphtheria mortality from seventy-five to twenty-five per cent. Fischer, Brannon, Biggs, Parks, and many others, of New York, Shirley, of Detroit, Babcock, of Chicago, Rose, of Kansas, Schell, of Indiana, are a few among the vast number of American writers who have recently indorsed it.

I may state here that the reports from Kentucky, which I have seen, have all come from the city of Louisville, and that the gentlemen who have used it there all indorse its value.

Among recent foreign statistics those signed by the superintendents of six London hospitals, with a total of 2,182 cases, are of much value. These six London institutions all agree that it has reduced the mortality below that of any former year; that the effect on the laryngeal cases has been especially favorable, and that the influence on the clinical course of the disease has been uniformly beneficial.

Among the most striking of American statistics are those in regard to its prophylactic value. They were collected by the Health Department of New York City. Antitoxin was used for immunizing purposes on about one thousand children in several large institutions in which the disease had been prevailing in epidemic form. Of these one thousand three were attacked with croup within twenty-four hours, and all recovered. Three had mild laryngeal diphtheria within thirty days, and twelve had diphtheria in periods varying from thirty to sixty days after immunization. In the thirty days preceding the immunization in these same groups of children about one hundred and fifty cases of diphtheria had occurred.

With these statistics we must class those obtained from the Chicago epidemic of last fall. Here eight hundred and five cases were treated. The diagnosis in all was confirmed by the microscope. The mortality in the whole number was 6.4 per cent. The mortality rose from being nil of those treated on the first day (sixty-one cases) to 2.6 per cent of those treated on the second day (three hundred and seventy-two cases) and later than the fourth day the mortality was 28.9 per cent. Similar reports come from continental cities.

In the light of our present knowledge the physician would certainly seem gravely culpable who did not give his patient the benefit of a trial of antitoxin. On the other hand, it may still be admitted that more time is required to establish the exact value of this treatment.

To recur to the points mentioned in the beginning of my paper:

1. A few very rare cases of immediate death following the administration of antitoxin have been reported. One of these, that of a young girl in Brooklyn, had been announced just prior to the last meeting of the society a year ago. Since then we have the sad case of Prof. Langenhan's child in Berlin and a similar one in the practice of Dr. Haldeman, of Ohio. In both the antitoxin was used for prophylaxis in healthy children, and in both death ensued within a few minutes. In Dr. Haldeman's case the hypodermic was administered to the child while asleep.

A recent editorial in the New York Medical Journal, in commenting on these cases, remarks that syncope induced by a slight cause may be serious, even fatal, and questions the wisdom of administering a subcutaneous injection to a sleeping person. Furthermore, it concedes that sudden death may be expected to occur now and then immediately after the subcutaneous injection of any thing, be it so simple as distilled water, whether as a mere coincidence or through some subtle connection of cause and effect. At the same time this editorial agrees that every case of the kind ought to be put on record, and concedes that the utmost caution should be employed in the use of diphtheria antitoxin.

It seems that the cause of death in these rare cases will soon be established. Fischer, of New York, has expressed the opinion that it was due to the intravenous injection of air, and Seibert has carried out experiments on guinea-pigs which confirmed this. Seibert believed that the deaths were due either to the antitoxin itself (either excessive quantity or too old an article), or second, to the carbolic acid which was used with it for preservation, or third, to the passage of air into the veins. Experiments excluded the first two agencies, while the third produced symptoms in the guinea-pig very similar to those occurring in the few fatal cases so far reported in human beings.

The more concentrated preparations of serum now being put upon the market, by permitting the use of a much smaller quantity, will diminish the danger of the accidental entrance of air. The objection made by Winters, that even when administered on the first day antitoxin is not always specific, seems well taken, as the records of the Willard Parker Hospital show.

Finally, its especial value in laryngeal cases is the point upon which I would lay stress. I was surprised to hear a colleague, whose experience and opinions I highly esteem, declare a few months ago that he

questioned the value of antitoxin in laryngeal diphtheria, though he esteemed it highly in diphtheria elsewhere. Since the collective investigation of Welch, of Johns Hopkins, last summer, in which the great influence of antitoxin in these cases was demonstrated, experience has more and more confirmed this fact. As the danger in such cases is from the downward extension of the membrane rather than from the toxic effects of the poison itself, the effect of antitoxin speaks well for its power in limiting this extension.

For the last eighteen months, in every case into which I introduced a tube, I have at the same time injected the antitoxin. My results in the length of time have been far more favorable than before, and several of the cases were first seen when they were already suffering with very acute laryngeal obstruction. In two of these the temperature rose from 99°, at the time of the administration of antitoxin, to 102°, and stayed at this point or thereabouts for several days, but I have never seen any more serious symptoms produced by it, certainly never any depression in my own experience.

LOUISVILLE.

TYPHOID FEVER.*

BY H. H. ROBERTS, M. D.

From the first observance by Eberth, and independently by Koch, in 1880, of the typhoid bacillus, this disease has been robbed of many of the horrors that formerly accompanied it. In this era of the bacteriologist, with the aid of the microscope, we are prepared to trace out these micro-organisms, and with our numerous antiseptic remedies in a manner control their propagation.

Many experiments have been made since the discovery of this particular bacillus to infect lower animals with typhoid fever, but in every case the result has been a failure. Although some of the earlier experimenters claimed to have produced a condition resembling typhoid, I am inclined to think their results came from accidental contamination or imperfect modes of research.

Failure to produce typhoid fever in the lower animals is not opposed to the view that the Eberth bacillus is the specific cause of the disease in man. No other organism has been found in the deeper layers of the intestinal glands involved in typhoid fever; on the other hand this

*Read before the Kentucky Midland Medical Association, at Georgetown, August, 1896.

bacillus is constantly present, and the more numerous the bacilli the greater and earlier the fatality.

The typhoid bacillus is not a putrefactive one ; that is, it does not develop or increase in animal tissues which have undergone putrefactive changes, although it has been shown that they multiply very rapidly in the spleen after death, and up to the time putrefaction commences.

The most frequent mode of inoculation is by the transmission of the bacillus into the body through water or milk which has been infected, or by fruits and vegetables which have been washed in contaminated water.

There are well-established facts which indicate that the development of an attack of typhoid fever and the severity of the symptoms depend upon the quantity of the infected material introduced into the body.

Any material that has been infected by the stools of a typhoid fever patient is especially dangerous. Repeated or concentrated doses of such infected material may infect the individual, when a diluted quantity of the same material would be harmless ; hence the great importance of always destroying the stools of these cases. The circumstances and environments of the individual, and those conditions which reduce the vital resistance of the tissues, such as vitiated air in overcrowded and ill-ventilated apartments, are most favorable to typhoid fever when the specific cause is present.

The bacillus, on entering the alimentary canal, passes through the stomach, upon which it produces no effect, and is hurried on through the duodenum and jejunum by the more rapid peristalsis down to the lower part of the ileum, where an obstruction—the ileo-cecal valve—produces a comparatively stagnant reservoir. The bacilli, thus stopped in their course, attack the intestinal wall or are incorporated into it. From this point they are carried through the blood and lymph vessels to the mesenteric glands and spleen.

The pathogenic nature of this bacillus depends upon the formation of a ptomaine termed typhotoxin. In consequence of this poison, together with other poisons constantly present in the intestinal canal, there is produced a general toxemia, upon which depends the well-known train of symptoms in typhoid fever.

We have not only the intestinal involvement, but various organs of the body become infected. There is congestion and tumefaction of Peyer's plaques and mesenteric glands, congestion of the liver, kidneys, and spleen, mental hebetude and wasting of the tissues generally.

Now, recognizing the cause of typhoid fever, we should inspire the laity with a sense of strict hygiene; have better attention from our health boards, especially during low stages of water, and more especially during epidemics of the disease. The best safeguard is to boil water and milk, which destroys the toxic principle, never forgetting to thoroughly disinfect all typhoid dejecta.

The most favored method of treatment at the present time is the antiseptic one. This is accomplished by thoroughly disinfecting the alimentary canal. Of the list of remedies which have their particular advocates, we find sulphocarbolate of zinc, calomel, salol, boracic acid, resorcin, arsenite of copper, carbolic acid, naphthol, naphthaline, thalline, etc., all of which have been used with more or less success. I have had excellent results from the sulphocarbolate of zinc in five-grain doses every three hours until constipation is produced, after which I continue the zinc, using oil and opium to combat the constipation.

Reduce the fever by the cold bath or cold pack as often as the temperature rises above 102°. This will rarely be necessary more than three or four times within the twenty-four hours after the physiological effect of the zinc is produced. Keep the kidneys flushed by giving large quantities of water; avoid stimulants until late in the attack, unless symptoms of heart failure arise; secure plenty of sleep by giving sulfonal, trional, chloral, or morphine if necessary, as in this way we overcome much of the nervous irritation. Administer a vigorous and nourishing but bland diet. A food that has been highly recommended by Dr. Ussery, formerly of St. Louis, but now of Paris, Ky., is the banana. Analyses have proven that the banana contains fully 95 per cent nutrient material, and Dr. Ussery is of the opinion that it is the only solid food we can use with safety in typhoid fever.

With the Woodbridge treatment I have had no experience, though a great many have faith in and are enthusiastic over its results. Treatment along the antiseptic line, for which I strongly contend, is worthy of trial.

I believe that all cases of hemorrhage in typhoid fever are caused by inactive treatment in the early stages.

By giving strict attention to early treatment, keeping the patient well nourished, and having a good reliable nurse if possible, I believe we can reduce the mortality of typhoid fever to almost nil, which, after all, is the great object for which we are striving.

PARIS, KY.

Foreign Correspondence.

LONDON LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

Old World Pharmacy ; Increase of Lunacy ; Inoculation in Snake-Bite ; Hospital Abuse ; A Civil List Pension ; Press Censorship in Turkey ; Typhus in Liverpool ; The Vaccination Inquiry ; A Ministry of Health ; Mr. H. M. Stanley.

The Historical Manuscripts Commission have come across an interesting example of Old World pharmacy among a collection of documents preserved by the Marquis of Salisbury at Hatfield House. It appears that toward the end of the sixteenth century Sir Henry Upton was sent on a mission to the French King in Paris, and there became ill, whereupon the physician of the Royal House gave him a "confectio alcarmas, compounded of musk, amber, gold, pearl, and unicorn's horn, with pigeons applied to his side, and all other means that art could devise sufficient to expel the strongest poison, and he be not bewitched withall." The ambassador expired.

The fiftieth report of the Commissioners in Lunacy states that the total number of insane patients on January 1st, was 96,446, an increase of 2,365 upon the corresponding number of last year. This increase is stated to be the largest on record. The report also adduces statistics showing that the proportionate increase is vastly greater in the pauper class than in the private class.

The late M. Pasteur's assistant, Dr. Calmette, has been lecturing at the Royal College of Physicians and Surgeons on his recent experiments in inoculation for snake-bite. Reports of cures are now coming in, and the preparation and mode of treatment have been well worked out. The virus does not appear to be exactly an antitoxin, but it works to the same end by acting on the cells of the body and rendering them proof against the poison. As in the case of the injections for diphtheria and tetanus it does not multiply in the body, but has to be constantly introduced from without, and its action, though not instantaneous, is extremely rapid.

Mr. Horder, one of the secretaries of the Ethical Section of the British Medical Association, has written upon the reason of the deficiencies in the funds of so many London hospitals. He considers that the lack of means is no doubt largely due to the enormous number of persons who frequent the out-patient department, a number so large that it is impossible for them to be properly treated by the staff, the cost of medicine becoming in itself

a very heavy item. The number of out-patients per thousand inhabitants of London is three hundred and seventy-one, consequently a large proportion obtaining medical aid gratis do not belong to the necessitous poor for whom the hospitals were founded. Mr. Horder suggests that the public ought to refuse to subscribe to hospitals which carry on such indiscriminate outdoor relief, and that the managers of the Hospital Sunday Fund should give out that no hospital will be assisted unless it adopts a proper system of inquiry into the circumstances of its out-patients.

Professor Huxley's widow has been granted a Civil List pension of £200 a year, as recognition of her husband's services. The Medical Press, commenting on this, says: "It affords subject for reflection that in this wealthy country the man who contributes more largely to the welfare of the community than a wilderness of millionaire brewers or stock speculators receives so little thanks of a material kind that he has to leave his widow to the mercy of a system which rewards his labors with a pitiful £200 a year."

The press censors of Turkey prohibit the importation of educational books, this state of affairs being brought about by the discovery in one book of the formula, H_2O , which the wise men of the court interpreted to mean Hamid II is nought—a cipher—a nobody.

Liverpool appears to be the only remaining city in these islands where typhus may be said to have its home; last year one hundred and sixty-two cases of this disease were notified, of which twenty-four died. Dr. Hope says that the first cases, as a rule, occur among children. The ages at death of the cases were as follows: from two to five years of age, two; from five to ten years, one; from ten to fifteen years, one; from twenty to thirty years, one; from thirty to forty years, eight; from forty to fifty years, eight; from fifty to sixty years, one; from sixty years and upward, two. In the hospitals of the London Metropolitan Asylums Board last year only three cases, all from the East End; the patients recovered.

Some of the medical members of the Commission on Vaccination appear to fear that the paragraphs dealing with the relaxation of compulsion are liable to misconception, and require presenting to the public with something in the nature of an explanatory note. Sir Guyer Hunter and Mr. Jonathan Hutchinson have a memorandum to the effect that they are not able to recommend such a large relaxation of the compulsory law as is implied in the paragraphs dealing with compulsion, but they think that no further change should be made than to allow a magistrate, before any one refusing vaccination has been summoned, to abstain from inflicting fine, if satisfied on the evidence given on oath that the objection was one of conscience. They also consider, notwithstanding the difficulties set forth in the paragraph dealing with revaccination, that operation at the age of twelve years should be made compulsory.

At a public conference held by the Sanitary Inspectors Association, Sir B. W. Richardson was in favor of there being appointed a Ministry of Health, with a president, chief, and other officials. The construction and

duties of the Ministry of Health would lead to several divisions of labor. In addition to the registration of births, deaths, and marriages, a complete system of registration would be established, and the returns supplied would include not only the diseases affecting human kind, but diseases affecting animals and plants. The reports of meteorological conditions would be duly sent to the ministry, and the relations of meteorological states and the prevailing health would be effectively and systematically traced out. The returns of coroners' courts would likewise be sent, and to the Ministry of Health would be referred all the work now carried out by the medical department now under the control of the Local Government Board. The working of the act dealing with adulteration and the carrying out of public analysis would of necessity be brought under its direction. Officers appointed under the new regulations would especially report to the Ministry of Health on sanitation of the factories in the whole of the Kingdom. The work hitherto done by the veterinary department of the Privy Council would be transferred to the same ministry. Prison and police supervision and the supervision of public works would also become functions of the Ministry of Health. Sir Benjamin Richardson suggests that there be six departments, the registration department, the local government department, factory and industrial department, analytical and chemical department, veterinary department, and public works and prisons department.

Mr. H. M. Stanley is recovering from his severe attack of gastritis. It will be remembered that he was at death's door for nearly a month when he returned home from Lake Nyanza to bring up the Barthelot rear column, that he had another serious illness when with Emin Pasha's people, and that he was so ill just before his marriage that during the ceremony in Westminster Abbey he had to be given a chair. In each case gastritis accompanied by recurrence of fever is the cause of illness. Mr. Stanley is fifty-five.

LONDON, September, 1896.

Abstracts and Selections.

TREATMENT OF BACTERIURIA BY INTERNAL DRUGS.—In a paper in the recently issued fourth volume of the Edinburgh Hospital Reports Dr. Lowell Gulland has an important and suggestive paper on this subject. Organisms, he says, may make their way into the normally aseptic parts of the urinary apparatus in four different ways: (1) by spontaneous growth from the urethra into the bladder; (2) by instrumental introduction; (3) by the bursting of an abscess into the urinary tract—e. g., from parametritis or appendicitis; (4) by transmission through unbroken tissue from elsewhere—e. g., the rectum; and (5) by passage through the kidney from the blood. Only a few organisms have been proved to appear in the urine in this way. Although the urine forms an almost ideal culture medium no organism will remain in permanent possession of the urinary tract unless it is pathogenic or unless there is retention of urine. Any organism will probably cause a certain amount of damage to the mucous membrane, and its primary development will thus be favored; but as the epithelium recovers the rate of removal of the organism will exceed the rate of growth and the organism will at last be eliminated. Cystitis is by far the most common inflammation of the urinary tract. The ammoniacal fermentation of the urine, formerly thought to be invariable in cystitis, is only occasionally present, and as a matter of fact the urine in cystitis is frequently acid. In reference to treatment, when the acute symptoms of the attack have subsided and the mucous membrane has recovered to a certain extent, there is still over the whole or part of its surface a layer of adhesive muco-pus swarming with organisms. In this condition washing out of the bladder is often most efficacious, but in certain cases it is inadmissible, and recourse must then be had to administration of remedies by the mouth. Drugs to render the urine acid if it is alkaline are of course useful. Various germicidal remedies have also been recommended, but all of them, Dr. Gulland shows, are excreted in a form in which their germicide value is small. He suggests, however, that although they do not destroy the vitality of the organisms they may have an effect upon their virulence either by preventing the secretion of their toxic products or by neutralizing these when formed. Such a view is of course extremely difficult to put to the test of experiment. However they may act, certain drugs do undoubtedly good in cases of cystitis. In the first place Dr. Gulland places salol; this renders the urine acid, both its constituents are excreted in what is possibly an anti-toxic form, it produces no gastric irritation, and with reasonable care there is no danger of carbolic-acid poisoning. All the other drugs in common use for this purpose have the great disadvantage of causing, sooner or

later, some—it may be severe—gastric irritation. In conclusion, Dr. Gulland remarks that it is idle to expect any real antiseptic action until some strongly antiseptic substance is found which can be taken in large quantities, which has no irritating effect on the stomach or kidneys, and which is excreted by the urine in a form as antiseptic as that in which it is ingested. The paper is an extremely interesting one, but it seems to us that its obvious moral is that in every case of cystitis washing out should, unless there are any distinct contra-indications, be assiduously employed.—*Lancet*.

“OVARIN” AND OVARY JUICE IN CHLOROSIS.—At a recent French Congress of International Medicine (*Sem. Med.*, August 19th,) Spillman and G. Etienne presented a communication on this subject. They expressed the view that the morbid phenomena often preceding the advent of menstruation were the result of an intoxication, which disappeared when the function became regularly established. The frequency of menstrual disorder in chlorosis was well known. The ovary might be regarded as (a) a gland having an external secretion, namely, the ovum; (b) a gland having the function of eliminating organic toxins by means of the menstrual blood; (c) a gland with an internal secretion which, like that of the testicle, plays an important part in general nutrition. If chlorosis is a disease of the ovaries, these three functions are modified or abolished, and with the suppression of menstruation a special intoxication is developed constituting chlorosis. The bad state of the general health in turn hinders the cure of the ovary. If, therefore, the product of the internal secretion of the ovary could somehow be introduced into the economy, it appeared to the authors likely that a cure both of the local ovarian mischief and of the systemic intoxication might be effected. They use three substances: sheep's ovaries in the fresh state, dried ovary, and ovary juice prepared by the method of Brown-Séquard and d'Arsonval. Six chlorotic girls were treated with these substances. All the patients, as soon as the administration was begun, experienced very sharp pain, localized particularly in the lower abdomen, with headache and vague muscular pains; in two rise of temperature (100° F. and 101° F.) occurred; the pulse was accelerated to 100. In three the remote results of the treatment were distinctly favorable; the general condition rapidly improved, the pallor diminished, the number of red corpuscles increased, and the strength was regained. In one patient in whom menstruation had been suppressed for three months and a half the menses came on a fortnight after the beginning of the treatment; in another the function was restored in three months. The authors sum up to the effect that in the treatment of chlorosis, “ovarin,” by facilitating the elimination of toxins

CROSS LIGHTING.—Some traditions die hard, being accepted without examination by nine persons out of ten and by all who are in or under authority and, like officials generally, opposed to or suspicious of innovation. Among these is the belief in the hurtfulness of cross lighting. This method of lighting would seem only to be held injurious in schools, for in our own houses we are only too pleased if we can have windows on two or more sides of a room. Even in Germany, where statistics and experimental investigation pervade every department of administration, and where in each detail the executive is guided by an order in council somewhat inappropriately called an "Erlass," we find cross or double lighting still expressly condemned. Yet Cohn and Förster, Javal and Ferrand, Rumbold and a Royal Commission on School Construction have urged the groundless nature of the prejudice. Provided always that the eyes are not dazzled and that no shadow falls on the reading or writing, it is impossible to have too much diffused daylight or its artificial equivalent. The loss of intensity with increasing obliquity of the rays of light is acutely felt in wide rooms, especially when not high in proportion, on the side opposite the windows; whereas if there be windows or lights on each side the intensity of illumination is equalized and its total amount doubled. It is only necessary that that coming from the right should be naturally or artificially the weaker, as by having the windows north and south or by filling those on the right with clouded glass. Windows in front are always objectionable, but light from behind, if not so strong as to cast a shadow, can but serve to increase the illumination derived from the proper quarter. As Cohn and Förster long since pointed out, reading or other work demanding clear but effortless vision is, in the open air when the sky is overcast, a real luxury. Under these circumstances the light is ample but shadowless; it comes from everywhere, but from no one quarter more than from another. The most perfect artificial illumination conceivable is that obtained by Hrabowski's arrangement of hemispherical milk glass reflectors with prisms and mirrors, by which the light of an electric arc lamp is diffused equally throughout the building, though the source is hidden from view. The light is photometrically equal to that of a clear summer day and as free from color; it is almost shadowless and is, in fact, superior to daylight in not being liable to fluctuations, although its intensity can be regulated at will.—*Lancet*.

A CASE OF MALIGNANT PUSTULE; RECOVERY.—Cases of malignant pustule occur so very rarely in country practice that details of a case which came under my care during the past month will probably be of interest to many of your readers, particularly as they illustrate the very satisfactory results attending radical surgical treatment, even after the appearance of severe constitutional symptoms.

The patient, a farmer's son, came to the surgery one morning with two very characteristic pustules, each having a black eschar surrounded by a well-marked ring of vesicles, upon the fingers of his right hand. These

were considerably swollen and the lymphatic glands in the axilla were enlarged and tender. He told me that about a fortnight previously he had been dressing sheep for "maggots," and one becoming restive he had struck at it and wounded his fingers upon its teeth. He, however, took little notice of the injury and continued his employment till finished. The wounds partially healed, but two days previously they had become inflamed and irritable and the blebs and swelling had appeared. Early that morning he had had a rigor. The appearances and history were so suspicious that I determined to have another opinion. Twelve hours later Mr. E. B. Hicks, of Easingwold, his son, and myself again examined the lad. The arm as well as the hand was now greatly swollen and the lymphatics running to the axilla were red and tender. Our consultation resulted in a unanimous opinion that we had a case of malignant pustule to deal with, and that the free removal of the wounds and surrounding indurated parts was the only treatment likely to be of service. This was done, and the raw surfaces well swabbed with iodine liniment (1 in 8) and then dressed with boracic dressings. The lad slept well during the night, the hand and arm being much less swollen and the temperature at 99.5° F. on the next morning. On the fourth day after I redressed the wounds, which were healthy, while the temperature was normal and the lad was feeling quite well.

That this was a genuine case of malignant pustule I think there can be but little doubt. The farmer stated that his flock were healthy, but there have been cases of anthrax in the neighborhood, and it is probable that the infection was in the wool of some of the sheep, the patient's fingers becoming inoculated by contact with it subsequent to the injury.—*Dr. William C. Ellis in the Lancet.*

DECIDUOMA MALIGNUM.—J. Neumann, of Schauta's clinic summarizes (*Wein. klin. Woch.*, July 2, 1896), the present state of our knowledge on this subject. The first symptom is, in the majority of cases, menorrhagia coming on at a most variable period after parturition; this is usually profuse, and since it is due to the opening up of vessels by the growth of a tumor, is not, as a rule amenable to ordinary hemostatic treatment. The patient soon becomes anemic and cachectic, and the tumor increases in size with greater or less rapidity. Metastases appear in the vagina, but may be removed in many cases with permanent recovery; if, however, foci are set up in the lungs hemoptysis occurs with a rapidly fatal issue. Infection takes place through the blood stream. The history of an untreated case is that of an extraordinary malignant uterine tumor leading to metastases through the blood stream, severe anemia, cachexia, and death. If the patient is to be saved the diagnosis must be made early and depends upon the history, the hemorrhage, the enlargement of the uterus, and the detection of a tumor within it; the disease can, however, at this period be absolutely diagnosed only by the detection of the typical deciduoma tissue in a scraping. It must be remembered that any pregnancy may be the starting

point of a malignant deciduoma, the symptoms of which have been already enumerated, and the corollary is that every puerperal woman requires medical attention until the flow of blood from the uterus has permanently ceased. Microscopically the author adheres to the views laid down in his book on the subject, that both syncytial and ectoderm cells enter into the formation of the tumor. The former spread mainly between the muscle fibers, but the latter take on the characters of a typical epitheliomatous growth; both kinds of cells are intimately bound together, and both spread into the blood-vessels. Hence a malignant deciduoma belongs histologically to the carcinomata, but pathologically to the sarcomata, exhibiting, however, sufficient deviation from the normal in its mode of growth to warrant its being placed in a special class. The recent researches of Metteus show that, while the syncytium arises from the uterine epithelium, Vaughan's layer is derived from the fetal ectoderm, and we have therefore the extraordinary circumstance of fetal elements proliferating in the maternal organism, which Neumann considers the most interesting discovery, from the scientific point of view which the study of the subject has so far elicited.—*British Medical Journal*.

VERATRUM VIRIDE AND GELSEMIUM IN TRAUMATIC TETANUS.—Medical News, July 18, 1896, reports the following case: A boy, aged six, while playing in his yard, barefoot, cut the ball of his left foot with a piece of glass. The wound apparently healed. Some nine days after (April 14th) he complained of stiff jaws and difficulty in swallowing. These symptoms increased until, on the night of the 16th, tetanic spasms began to manifest themselves. The cicatrix of the wound was cleaned and scraped. It seemed somewhat tender on pressure, but no foreign body was discovered. The site was scarified, however, and turpentine oil applied, and four-grain doses of ammonium bromide were given every two hours. As there was no perceptible improvement on the 17th, tincture of veratrum viride was given, at first one drop every hour, then two drops every hour. As this did not seem to prevent the return of the spasms, from time to time fluid extract of gelsemium was given, at first in drop doses every hour, in conjunction with the veratrum, then in two-drop, and finally in three-drop doses. The veratrum was also increased on the 20th to three drops every hour, so that the child was taking three drops each of the veratrum viride and the gelsemium every hour, and it seemed to require this amount to control the spasms. This dosage was continued for forty-eight hours. Only once during this time did it produce active vomiting, or sufficient nausea to require an opiate to control it. When this relaxed condition was obtained, the drops were decreased to two of each on the 22d, and on the 25th to one of each, which was continued until the 27th, when the interval was lengthened to two hours, and gradually thereafter discontinued. The ammonium bromide was given in three to four-grain doses every two hours during this entire period. The remedies in diminished doses were

continued to April 30th, when the boy could open his mouth without difficulty, had a good appetite, was playful, but more boisterous in his manner than usual, or, as his mother said, "more nervous." The remarkable thing to the author was the tolerance in one so young of such powerful remedies and in such doses. It seemed to require these doses to control the conditions producing the tetanic spasms. The instructions were to decrease the amount and frequency of dose when distinct signs of nausea appeared or the signs of convulsions abated. The author had been led to think that *veratrum viride* might prove a valuable remedy in traumatic tetanus, as it had done in puerperal and other convulsions, and that *gelsemium*, in its peculiar action in causing relaxation of the muscles of the jaw, might prove a valuable adjunct, and in this case these remedies did not disappoint.

CEREBRO-SPINAL MENINGITIS.—Furbringer (*Deut. med. Woch.*, July 2, 1896,) relates the following case in a man, aged twenty-five, who was suffering from acute gonorrhea. The day before admission he complained of general pains, but more particularly in the head and abdomen. On admission he was drowsy, the temperature was 39.4° C., the pulse 72 and regular, and the respiration 28. The pupils reacted to light, but the left was smaller than the right. The optic papillæ were much reddened. There was no discharge from the ear, and no evidence of injury to the head. There was some rigidity of the neck, and great motor restlessness, with occasional spasm. Pure pus from the urethra contained gonococcus; 25 c.cm. of turbid fluid was drawn off by spinal puncture, and a micro-organism very like the gonococcus was found in the pus cells. Death occurred three days after admission. Pus was found in the soft meninges and the cerebro-spinal fluid was turbid. Pus was also found at the base of the brain. In the pus from the spinal cord and brain a micro-organism was again found resembling the gonococcus. Schwartz and Kiefer also made a bacteriological examination. In a single cell some twenty to forty pairs of the micro-organism were found. The micro-organism was decolorized by Gram's method. Certain differences, however, were found between this micro-organism and the gonococcus. Abundant growth was obtained on glycerine agar with or without the addition of human blood. The evidence finally showed that it was not the gonococcus, but Weichselbaum's meningococcus intracellularis. There was thus no causal connection between the gonorrhea and the cerebro-spinal meningitis. Furbringer agrees with Heubner as to the diagnostic value of spinal puncture in these cases.—*British Medical Journal*.

SOMATOSE.—R. Drews (*Centralbl. f. inn. Med.*, June 6, 1896,) describes the action of somatose upon the mammary gland in nursing women. After referring to the observation of Wolfe and Taube he relates his own researches in twenty-five cases, appending short details of five characteristic

cases. The causes of the insufficiency or arrest of the milk secretion were either anemia, loss of blood, enfeeblement from repeated pregnancies, severe mental perturbation, or some illness occurring during pregnancy without any contra-indication to suckling. Under the somatose treatment there was in all twenty-five cases an abundant secretion of milk, so that the infant was suckled for several months longer, and the difficulties attending suckling disappeared. These observations show an important success in the feeding of infants, and the method is of special value in the case of premature infants or in those who have been artificially fed, but in whom a return to the mother's milk is of vital importance. All the ordinary measures had been tried in these cases before the somatose, but without success. The increase in the secretion of milk was not due to any action of somatose upon the patient's appetite and general nutrition, but in the author's opinion to a specific action on the mammary glands. It would be interesting to know whether there was any alteration in the quality of the milk under this treatment before artificial feeding is had recourse to. The author would, therefore, recommend the use of somatose in cases where the milk is insufficient or where previously suckling was not found possible, provided of course that the breasts are sufficiently developed, and no disease is present which precludes suckling. The dose of somatose is a teaspoonful given three or four times a day in milk, soup, etc.

ETIOLOGY OF LOBULAR PNEUMONIA.—Kreibich (monograph published by Braumuller, Vienna, 1896.) examined 27 cases of lobular pneumonia, 20 of which were of the inspiration variety. In 23 he found the diplococcus pneumoniae 11 times in pure culture, 5 times with *B. coli communis*, 4 times with *staphylococcus pyogenes aureus*, once with each *B. pneumoniae streptococcus pyogenes*, and another unrecognized micro-organism. He asserts that broncho-pneumonia and especially inspiration pneumonia are generally caused by the diplococcus pneumoniae, but he notes that in man *B. coli* is also capable of causing lobar and lobular pneumonia. As an auto-infection from the cavity of the mouth, the occurrence of lobular pneumonia dependent upon the diplococcus pneumoniae is favored by such conditions as heart failure, hypostatic hyperemia, etc. In most cases of coli pneumonia there is infection by the blood from the intestine or from inflammatory processes in the urogenital tract. Inspiration pneumonia may end in suppuration, in gangrene, or in induration. With regard to the first termination, the variety of exudation is not generally influenced by the question whether the diplococcus was alone present or in company with other organisms, though the exudation has a tendency to be bloody if large infective masses are suddenly inspired. Gangrene is generally caused by anaerobes and saprophytes probably present in the inspired mass, which induce putrid changes in the contents of the bronchi, and by their katabolic products lead to necrosis of the inflamed portions of the lung. Induration apparently occurs when the metabolic products of the bacteria constitute a long-continued stimulus to productive inflammation.—*British Medical Journal*.

THE TEMPERATURE RELATIONS IN APOPLEXY.—Dr. Dana writes on this subject in the Post-Graduate and states that in cases of cerebral hemorrhage accompanied by hemiplegia the temperature of the paralyzed side is higher than that of the sound side, and that in acute cerebral softening from thrombosis or embolism this difference in temperature is not present. This, the author says, will be found a valuable means of distinguishing between the two conditions, and he quotes in this article four cases, all proved by necropsy. The differences in temperature between the two sides in these cases was usually from half to one degree. Dr. Dana acknowledges that there are no doubt many exceptions to this rule as there are to most others, but they are rare, and are to be explained either on the ground that the hemorrhage is very small or the acute softening is very extensive. It is possible, too, that certain peculiar localizations of hemorrhages and softenings modify the symptom, but for the enormous majority of cases the fact holds good. No perceptible disturbance of temperature was ever found in hemiplegia due to embolism, no matter how pronounced and severe the central disturbance was. On the other hand, in thrombosis, especially when occurring in old people with badly diseased arteries and a tendency to extension of the softening, there is rather more apt to be a disturbance of temperature whether the trouble be hemorrhagic or thrombotic, but the tendency is much greater with the hemorrhage.

PROSTATIC ENLARGEMENT.—Ciechanowski (*Centralbl. für. Chir.*, No. 32, 1896.) publishes the following results of an inquiry lasting over two years into the so-called hypertrophy of the prostate, and the anatomical conditions of senile insufficiency of the bladder: (1) Arterial sclerosis can not be regarded as a cause of the morbid changes in the kidneys, bladder, and prostate which, according to Guyon, constitute a diffused morbid condition called by this surgeon "prostatism." (2) The anatomical basis of the insufficiency of the bladder in every case presenting the clinical characters of the so-called prostatism is a quantitative change in the relation of the vesical muscular structure to the connective tissue. (3) This quantitative change is a regular phenomenon of advanced age, and increases in intensity as the patient gets older. It has reached a high degree when the discharge of urine is prevented by mechanical obstruction, and a still higher degree when a chronic inflammatory condition of the bladder has been established. Unless in very exceptional cases, it is only with an association of these three morbid conditions that any serious urinary trouble occurs. Such urinary trouble may be prevented to some extent by the compensatory hypertrophy of the vesical muscles which usually co-exists with the presence of a mechanical obstruction. The so-called hypertrophy of the prostate which, in the author's opinion, is the first stage in the morbid condition known as prostatism, is regarded not as a homoplastic new growth, but as the result of a chronic inflammatory process affecting sometimes the glandular portion, at other times the stroma, but most frequently both these ele-

ments. The occurrence of prostatic enlargement, which is not an invariable result of this inflammation, depends on the intensity of the process, and, above all, on the parts of the gland most affected. The more the glandular portion is involved the greater is the tendency to enlargement of the prostatic gland.—*British Medical Journal*.

RETRO-UTERINE PROLAPSE OF BLADDER IN RETROVERSION.—Lathuraz-Violet (*Annales de Gynec. et d'Obstet.*, April, 1896,) dwells upon an extreme form of pure retroversion of the uterus (without retroflexion), in which the fundus of the bladder is pulled right over the uterus so as to lie in Douglas' pouch. Thus the uterus is capped by the bladder, the cervix lying uppermost so as to press into the greatly-stretched bladder, which, when filled, will of necessity assume the shape of an hour-glass, or rather of an old-fashioned purse half folded on itself. Of course distension causes great irritation under the circumstances. Laroyenne demonstrated this extreme condition in a pregnant woman who died with the uterus unreduced. Not only did the bladder descend behind the uterus; it actually passed under it, so that the vesical fundus lay anterior as well as inferior to the uterine fundus. Thus there was bladder, distended with urine, between the hypogastrium and the uterus, the abdominal cavity and the uterus, the rectum and the uterus, and lastly between the vagina and the rectum. Lathuraz-Violet records a case of retroversion during pregnancy, where careful exploration during catheterism proved, in his opinion that the fundus of the bladder was drawn over the uterus down into Douglas' pouch, just as in the instance where the displacement was verified after death. The patient was a multipara, aged thirty-six, and the displacement occurred in the third month. In order to empty the bladder pressure on the posterior and lateral fornices was necessary during catheterism. The uterus was reduced—not without trouble—and the patient, free from further trouble, bore a live child to term.—*Ibid*.

MYOMA OF THE OVARIAN LIGAMENT.—Gessner (*Zeitschrift f. Geburtsh. u. Gynäk.*, vol. xxxiv, pt. 2, 1896,) detected during the removal of a fibroma of the ovary a tumor of the size of a bean in the ovarian ligament, equidistant from the uterus and the ovary. It proved to be a pure myoma. Gessner thinks that such a tumor, if allowed to continue to grow, would invade a neighboring healthy ovary so that a myoma of the ovary would develop.—*Ibid*.

A SON of Rokitansky, the celebrated Austrian pathologist, died recently in Vienna at the age of sixty. The deceased first appeared in public as an operatic singer in Prague in 1860, and he played in Her Majesty's Theater in London in 1865. He was for thirty years a member of the company of the Imperial Opera in Vienna, and for ten years a professor at the Conservatorium.—*Lancet*.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÆ"

Vol. 22.

SATURDAY, OCTOBER 17, 1896.

No. 8.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.
JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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JOHN P. MORTON & COMPANY, Louisville, Ky.

STERILITY IN WOMEN.

A brief but significant paper on this vexed question, which was read by G. Betton Massey, M. D., before the Philadelphia Obstetrical Society, September 3, 1896, appears in full text in the Medical News of the 3d instant.

Though the author's ideas are somewhat colored by the specialty (electro-therapeutics) of which he is an able representative, he certainly brings to light some facts, which the gynecological surgeon might contemplate with profit to himself and his clientele.

The teachings of Apostoli, Massey, and their school, have not only been as a rule disregarded in practice by the brilliant followers of McDowell, Sims, and Simpson, but their claims have in too many instances been held in derision and contempt.

In view of these considerations the following is spicy reading:

Aside from congenital deficiencies and anomalies of development of the essential organs of generation, we have been taught, since the days of Marion Sims, that the chief reason for sterility attributable to woman is narrowness or flexion of the uterine canal. When it is remembered that the narrowest pinpole as, on careful manipulation, will admit a sound which is many times larger than the self-propelling spermatozoid, it would seem that this reasoning is inconclusive. It is doubtless to the operative furor

that the popularity of the stenosis and atresia theory is due, for since the days of Sims and J. Y. Simpson practically no form of treatment has been employed except some method of enlargement of the canal. This was first accomplished by slitting the cervix. Owing to the combined ineffectiveness, morbidity, and mortality of this procedure, it has of late been superseded by so-called dilatation, which is accomplished by tearing apart the muscular and fibrous tissues which encircle the canal. Only exceptionally has it accomplished a cure of the sterility, which it is at times followed by serious consequences in the shape of parametritis and diseased appendages. One case of ectopic pregnancy and a number of instances of uterine and ovarian tenderness have been observed by me after dilatation.

The author holds that "far more important causes of sterility may be found (1) in imperfect participation of the uterus in the sexual orgasm, (2) catarrhal changes in the mucus of the uterus and tubes, and (3) in inactive ovaries."

The first defect (which he allows is probably not a serious one) he proposes to correct by the general intrapelvic action of electricity, toning the organs by improving the circulation and quickening muscular activity:

The method best adapted to accomplish this purpose is the vagino-abdominal galvanic application with covered vaginal electrode, which should be negative, a current of from thirty to forty milliamperes being turned on and off gradually and repeatedly by the swelling method. This may be supplemented with labile lumbar applications of the galvanic current to the sexual center of the cord, the patient lying upon the face with a large pad under the abdomen.

The second cause would seem to be one which electricity might directly correct, since the condition is a chemical one, and electricity is potent in effecting chemical changes:

Of the toxic effect of altered uterine secretions on the fertilizing cells of the semen there can be no question, and it is in these cases that galvanic electricity, applied within the cavity of the uterus, is of the greatest service by its alterative action on the secreting surface. Unless the intra-uterine treatment is indicated also by marked changes in the mucous membrane, the covered elastic electrode is best as promoting favorable changes in the mucous membrane with least traumatism. It has been my habit to employ the positive pole usually, though the choice of pole for this purpose is open to further investigation to determine whether the normal alkalinity of the uterine mucus should be increased by the negative pole or diminished by the positive pole. Possibly the results depend rather on the simple excitation of a more normal secretion.

As to the third cause the author teaches that deficient activity of the ovaries as a cause of sterility can only be inferred in the absence of lesion, or other patent defect of "functionation on the part of the woman, and of course after the question of the possible sterility of the husband has been eliminated."

Any method of treatment that promotes increased activity of the pelvic circulation, such as negative vagino-abdominal applications of either current, may increase ovulation, while the musculo-tonic effect of the galvanic current, by the swelling method, may do much to lessen a practical maternal impotence from weakened musculature, which is only less disastrous to the conjugal relation than similar conditions of the male.

The author has treated only five patients in whom the sterility was clearly due to this cause. In four of these the treatment was successful at some time during a year following its cessation; in two it was almost immediate.

With the very necessary caution as to the danger of inducing abortion in women, who are unwittingly or wittingly pregnant when applying for treatment, the author closes with the following pregnant claims in results:

That electricity may cure sterility, when the patient only seeks relief from the pain of chronic metritis, is abundantly shown by a tabulated report made by the writer to the American Electro-therapeutic Association in 1894, where, of thirty-two cases of uterine disease that involved in each instance at least a temporary or acquired sterility, eight had become pregnant after the treatment. Apostoli, at the same meeting, reported pregnancy in eighty cases after intra-uterine electric treatment, some after one application. Of the twenty-two cases reported *in extenso* in the paper, five were nullipare.

From such considerations it would seem that in the treatment of sterility the conservatism of Electro-therapy promises better results than the radicalism of surgery.

Notes and Queries.

To the Editor of the Practitioner and News:

HOW IS IT DONE?—*Dear Sir:* I believe that when you read the signature to this communication you will acknowledge that I am not entirely unknown to the medical profession of this city and to a few of those citizens whom we all desire as patients.

The years of my service here are not a few, yet, pondering over the successful efforts of many fellow practitioners, younger and older than myself, I confess to a feeling of envy at the way in which they succeed in getting themselves before the public.

You know (and knowing, will not, I am sure, divulge the confidence I repose in you) that I am well thought of among my confrères. I believe, too, that you know that my practice is enough to enable me to live well and pay as I go along; that, further, the articles I publish in your journal are not infrequently copied in whole or in part by other journals, and that you have not infrequently solicited me to contribute more often. You may not know that I number among my patients representatives of every newspaper in the city and almost as many of the special journals. I am certain that my assurance that such is the case will suffice for you without further proof.

I am anxious to increase my practice as rapidly as possible, and will frankly state that the foundation of that desire is to see my worldly goods accumulate in a ratio larger than has been my lot in the past two decades. I have questioned myself of late as to what may be the cause, why is it that others whom I (I believe you) think my inferiors seem to be obtaining what in comparison seems to me to be an undue share of the public patronage (I don't like the word). I have come to the conclusion that they succeed because of the publicity they obtain, and hence the title of this paper, "How Is It Done?"

I remember, my dear sir, some fifteen years ago, you did me the honor to say that the paper I read at Nashville was the best of the meeting, that such was the general concession, and the applause which followed the paper so satisfied me that I did *not* think your statement was uttered as idle flattery. There was no special mention of it in the newspapers of the day, although I even then treated (professionally only) many of those connected with the press, and they were friendly disposed toward me. That paper, if you will pardon my referring to it, was widely copied by the medical press of the country; it touched upon points which should interest the public as well as the profession. Not a reference was made to it in the secular press at that time or since.

I have read and you have seen essays, in abstract or entire, which the

newspapers have published, which were read before unheeding medical men which were announced as *the* papers of the convention.

How is it done? Only for the purposes of this communication, I wish to remind you of one instance that came under your observation, for I came to you for advice about it on my return.

Do you remember when the family of Senator X of a neighboring State telegraphed for me to come at once to see him? You may remember it when I recall the fact that we disputed, after I sought your advice, as to whether it was a case of tabes dorsalis or antero-lateral sclerosis. Not a word did I see in a morning or afternoon paper, weekly or daily or Sunday, in which was mentioned the honor done me by the consultation. When I sought to borrow a trivial amount from you at the beginning of this financial depression, you certainly have not forgotten the excellent advice you gave me on that occasion, when you were so sorry that you could not oblige me, as you would so much like to. I took it—the advice, and have since followed it.

I have zealously attended every medical convention held within a radius of four hundred and fifty miles of this city. I have read papers at every one, including the last at Posey County, Indiana. The medical journals have shown a zealous and, I think, a laudable rivalry in obtaining the articles I read; but did the newspapers of the day print any abstracts? Not they! Not even a notice of my presence at the meeting, although Puddlekins and Stimson, who did nothing but drink with the gang, received the benefit of half the dispatch that appeared from Poseyville.

How is it done? Three years ago I decided that my articles might possibly be lacking in general interest, and I determined to write one in a popular science direction. You not only published it (you have always been my friend), but actually called attention to it in an editorial comment. You said it was a "live topic," an "up-to-date subject," one in which "not only the profession, but the whole vast public was vitally interested." Surely you remember it! The title was "Longevity and Six o'clock Dinners from a Medical Standpoint." There was not a reference to it in the secular journals, although three of my friends separately mailed copies of the Practitioner and News to every paper in the city, and I know they received them, for I stamped, addressed, and posted others myself. At that very time there appeared in the Daily Bladder, Dr. Pomp's insignificant squib on "Why We Do Not Live Longer?"

How is it done? When Dr. Sagrado visited Louisville I gave him a dinner at the Esmond Club of which I have been a member for nineteen years. I invited the reporters and had a special waiter (who was, I afterward found, entirely unnecessary) to pour out wine for them. An elaborate account appeared in next morning's paper with a verbatim speech of Puddlekins and Stimson. My own was not mentioned. When Puddlekins and Stimson were speaking the reporters were drinking, yet their reports were more accurate than the speeches and better.

How is it done? I have tried every thing that seems to have succeeded with others, only to fear that a conspiracy exists among the newspaper-men to keep my name from their columns. Yet their confidence in me in coming to me with their ailments would hardly justify that belief.

When I was an interne in the hospital I made it a point to make an intimate friend of each reporter. I gave him all the news, and risked my position to tell him of cases I was told by the staff to keep quiet about. Even then, Hickox was mentioned twice where my name appeared once.

I criticised the staff and hinted in no vague terms that my Chief's diagnosis in some particular cases was all bosh. Even this, although mentioned, did not bring my name into prominence.

In early practice I telephoned to the papers every accident case that came to my notice or care. They would publish Hickox' something like this: "Pete Grubbs, the youngest son of S. T. Grubbs, fell while at play, and struck his index finger on the curbing. A profuse hemorrhage from the sub-clavian artery resulted, which might have proved fatal but for the prompt arrival of Dr. P. T. Hickox, of 411 44th Street, through whose skill the bleeding was stopped. Dr. Hickox expects to save the boy without amputating the arm."

Only a few days before my case was referred to as: "A Fall in Prices—Theodore Price Drops Three Stories, and Will Live!" "A physician was summoned last night to attend," etc. But for me, the newspaper would not have known of the Price accident, yet I was "a physician," and Hickox saved young Grubb's arm, and his address was given in full.

How is it done? A few years ago I was asked to attend the trial of some one, I think Dr. Copeland, who had transgressed the new medical law. He had advertised and, I believe, cured all diseases in his peculiar way and by means not known to the medical profession. I was asked to be present as one of the regular profession who would add to its weight and dignity and overwhelm the poor quack. Major Kinney described the two kinds of advertising, the direct and the oblique. The direct paid for, the oblique, a puff and free.

How is it done? How is the latter obtained free? To you, my dear Editor, I confess I am envious. I see Puddlekins, Stimson, and Hickox getting ahead of me in fame and in practice by the notoriety which they gain by what Major Kinney called the advertisement oblique.

How is it done? I want it, and I want it free. Surely the exponents of the success of this method do not themselves call attention to their supremacy. Is it possible that these men telegraph their own real or imaginary successes? That when called into consultation in important cases they call the public into consultation through the press? Do they give to the secular papers the titles of the scientific essays they are to read and at the same time the effect they produce upon their audience?

Can it be possible that these men ever bring their medical efforts in manuscripts to these papers for the public to read? If they do this, I beg

of you to let me know it, as I am determined to beat Hickox, even if I have to do it at his own game. Look out for the Courier-Journal and my new article on "The Free Silver Bacillus, Its Origin, Pure Culture, and the Antitoxin for its Destruction."

Yours gratefully,

AVERROES.

MURPHY'S BUTTON.—Czerny (*Centralbl. fur Chir.*, No. 31, 1896), in an abstract of a paper read at the last meeting of the German Surgical Society, states that he was led to make trial of Murphy's button by the results of recent experiments made by Marwedel on animals. These researches proved that the button effects a very even union of the intestinal walls without pseudo-membranous adhesions, and that the opening shows no tendency to subsequent contraction. Of 13 cases in which the author has used the button, 3 were fatal. In one of these fatal cases death was the result of pressure, gangrene, and perforation, in consequence of the application of too large a button. In the other two cases the button was used in the very unfavorable conditions of enterectomy for extensive gangrene of strangulated hernia. The button, Czerny found, was usually discharged in the stools in the course of the second or third week. In a case of successful gastro-enterostomy the button had not been passed up to the date of the patient's discharge twenty-four days after the operation. It is pointed out that the use of Murphy's button, like that of every other method of intestinal approximation, requires practice, although its mode of application can be more readily learnt than that of a good double suture, which in Czerny's opinion is still the best method of closing wounds in the intestine. The chief objection to Murphy's method is the sojourn of a heavy metallic substance in the intestinal canal. Until this has been discharged naturally by the bowel the surgeon must remain anxious as to the welfare of his patient. It is concluded that Murphy's button, though not the final solution of the problem of intestinal suture, marks an important advance in this direction, and therefore demands careful study.—*British Medical Journal*.

CEREBRAL TUMOR AND MENTAL DISTURBANCE.—In the State Hospitals Bulletin for the State of New York, recently published, Dr. Mellen reports a case of interest, especially to alienists. A female patient, aged sixty-six years, was admitted from an almshouse, of which she had been an inmate for three years, on account of mental disturbance and delusions of persecution. She declared that her legs had been amputated, she talked incessantly, and there was much mental confusion and impairment of memory. She was also violent and destructive and refused her food. There was a distinct musical murmur both at the apex and base, and there was strabismus of the left eye, this being deviated upward and inward. She became irritable and quarrelsome, and complained of headache; she declared that her husband had had his legs cut off in a railway accident, and she fre-

quently expressed a feeling of "being so stupid." Her health gradually failed, but one night she was found struggling with another patient, and after being put to bed she had a convulsion which lasted about five minutes. She fell out of bed and cut her face and had an attack of erysipelas. During a recrudescence of this attack she was found early one morning apparently in a sound slumber, but she could not be roused. Her pulse was rapid and feeble, her respiration frequent, her temperature 105° F., and she was unconscious and unable to swallow food. In the course of an hour and a half she died. The immediate cause of her death was apparently the erysipelas and the cardiac condition, but on removing the brain a tumor of considerable size was found lying against the right side of the pons and pressing upon that and the temporo-sphenoidal lobe. This was attached to the dura mater for two inches on the posterior border of the lesser wing of the sphenoid bone, which was eroded and roughened. The tumor weighed one and a quarter ounces; it was two inches long, one inch and three quarters wide, and one inch thick. It was separate from the brain, merely pressing on it, and the third and sixth nerves were involved in the pressure. Histologically it was a fibro-sarcoma. The presence of a tumor was not suspected during life, and it is an interesting question what was the relation, if any, between the tumor and the disordered mental condition? It is scarcely likely that the one was dependent on the other in any very close relation, but it is instructive as indicating the care necessary in the investigation of every so-called mental case. No doubt mental disturbance, usually transitory, is often a feature in the course of cases of cerebral tumor, especially those which are basal and frontal; but the presence of a tumor in this particular case seems merely to have coincided with the occurrence of mental disturbance.

EXPLORATION OF THE BRAIN WITH NEEDLES AS A SUBSTITUTE FOR TREPHINING.—In the Section of Surgery and Anatomy at the recent annual meeting of the American Medical Association (Boston Medical and Surgical Journal, August 13th,) E. Souchon proposed the exploration of the brain with a needle and syringe through capillary holes drilled in the skull as a substitute for trephining. He urged the simplicity of the procedure, its comparative safety, and the ease of its application as points in its favor. By its employment many lesions, such as abscesses, hard cysts, and tumors, may be readily diagnosed and located. In tumors of the same consistency as the brain, however, this method would be of no avail, unless some of the particles expelled from the needle gave some information as to their character under the microscope. The author employs a drill to which is added an adjustable guard to limit the penetration of the instrument. The punctures are made under antiseptic precautions, and when the inner table has been reached, or but partially drilled through, the instrument is withdrawn. The perforation of the skull may be readily completed with the point of a No. 1 aspirating needle attached to a syringe. Several holes may be drilled

at a distance from one another at the same operation. The danger of hemorrhage is but trifling, according to the observations of the author on dogs, and the reports of Spitz, Meinhard, Schmidt, and others. H. Manley, Senn, and A. H. Ferguson, in discussing this paper, thought that the usefulness of the method was limited, and that it could in no sense be used as a substitute for trephining.—*British Medical Journal*.

HYGIENE.—Thanks to the victorious microbe, it looks as if we should soon have to give up eating and drinking altogether. . . . Another sanitarian, however, declares that it is not the microbe so much as the weather that kills—the death-rate and the thermometer go up together.

I can not eat but little meat,
By microbes it is spoiled;
And sure I think I can not drink
Save water that is boiled;
And I'll endure low temperature
Since by the doctors told
That to live long, and keep us strong
'Tis better to be cold.

So let bacteria scourge and scare,
With ailments manifold,
To do us good we'll eat no food,
And keep our bodies cold.

I love no roast except dry toast,
And that at stated terms,
And little bread I eat, in dread
Of pathogenic germs;
Of milk no whit I take, lest it
Zymotic ills enfold,
And fevers breed; yet most I need
To keep my body cold.

A keen east wind I never mind,
And fifty Fahrenheit
Is the degree that best suits me
By day and eke by night;
Thus wise I strive to keep alive,
And haply to grow old,
With beef uncarved, athirst and starved,
And perished with the cold.

—*British Medical Journal, Pall Mall Gazette*.

THE NECROPSY OF A PARACHUTIST.—Mr. James Huxley and Mr. W. Jones Greer, of Newport, furnish the following to the *British Medical Journal* for September 12th: Before submitting the facts revealed by the *post-mortem* examination a brief history of the accident will be of interest. On the evening of July 21st a girl, aged fourteen years, took her seat and grasped the hoop of a parachute to make her first attempt as an aeronaut and parachutist. The balloon, with the girl and parachute, rapidly rose to

a height of between six thousand and ten thousand feet. She then jumped clear of the balloon, and came down swiftly for a distance of about three hundred feet before the parachute opened; it righted itself with a jerk and began to spin round. The girl was noticed to throw her legs about a good deal; there was a considerable amount of wind at the time, and the girl was carried over the river, into which she descended and quickly disappeared. She was attached to the parachute by clips, similar to watch clips, passing from each shoulder. A Board of Trade lifebelt was carefully secured round her waist. The body was found in about three days detached from the parachute; the clips were uninjured.

Post-mortem Examination. External examination: discoloration of forehead between eyes, a large bruise over front part of left side of head above and behind the ear, an abrasion of skin over back of right forearm. The body was well nourished, but not fully developed. Cutis anserina present. Tongue swollen and indented by the teeth; mouth and pharynx contained mud and sand. On dissection of the vertebral column no dislocation or fracture was discovered. No fractures or dislocations discovered anywhere. Internal examination: Thorax: the heart and pericardium normal in appearance; the cavities of the heart were found perfectly empty, the valves and endocardium smooth and healthy; the lungs were inflated, the pleural surfaces of the left were adherent almost all over, on the right normal; diaphragm normal. On opening the trachea it was found to contain mud and sand; the small bronchial tubes were found to contain mud, sand, and froth. The esophagus was empty. Abdomen: liver congested; on opening the stomach it was found perfectly empty; there was a small cicatrix on the posterior surface near the cardiac orifice.

On consideration of these facts we considered ourselves justified in coming to the conclusion that the girl was probably in a state of syncope when she reached the water, and that death was due to drowning.

THE DOSAGE OF CHLOROFORM.—Mr. Krohne has shown us a modification of his regulating inhaler, which he has devised for demonstrating the possibility of giving fractional doses of chloroform, and of regulating to a nicety the exact quantity of vapor received at each inspiration. The arrangement is simple enough, and merely consists of a narrowing of the middle part of the bottle containing the chloroform and its graduation in minims, so that the amount used can be read off at sight. From a very careful examination of his apparatus we are quite clear that it is possible by means of the modification of Junker's apparatus, which he calls his "regulating inhaler," to discharge chloroform vapor at a definite rate, so that the patient can under no circumstances get more of it than the administrator wishes, and that by means of the "feather indicator" which is attached to the apparatus it is possible to proportion this discharge to the respirations with the greatest accuracy. Of course this does not touch the main question of comparative safety of chloroform and other anesthetics, and to those who are con-

tent to use a cloth and maintain that safety lies in giving plenty of chloroform and plenty of air, all these niceties are matters of indifference. At the same time it is perfectly fair to point out, as Mr. Krohne does with all the vigor of an enthusiast, that at the least the people who give chloroform by rough-and-ready methods can not know what they are doing, and to urge that so far as reliable apparatus is available for the purpose, chloroform should be administered in as exactly regulated doses as any other drug. Putting other considerations on one side, even from a purely scientific point of view, the annual loss of life from chloroform is disheartening and discouraging to the last degree. What have we learned from it all? Nothing except that it is possible so to give chloroform that apparently healthy people shall die during the administration. Sometimes it can be ascertained afterward how much chloroform was used, although often there is doubt about even that, but rarely, indeed, is any evidence available as to how much the patient got, and at what rate he got it. This seems an elementary if not a fundamental question. But in most cases it is unanswered, and it is not likely to be answered, except by the use of apparatus properly contrived to give the administrator full control over the dosage of the drug. *British Medical Journal.*

A COUNTRY DOCTOR'S FEES IN 1831.—Dr. George A. Crother, of St. Joseph, gives an interesting account of some of the details of a country practice sixty years ago, as evidenced by the journal and account book of his grandfather, Dr. Dunlap, of Greenfield, O. Some of the surgical entries are particularly interesting reading :

To setting thigh-bone,	\$3 00
To dressing wound,	25
To visit and lancing abscess,	25
To setting arm,	1 00
To lancing breast,	25
To two visits, perforating frontal sinus and medicine,	4 00
To visit and dressing ankle,	1 00
To amputating hand and salts, (!)	5 00
To visit and reducing hernia,	1 25
To visit, opening abscess and pills,	50
To two visits and puncturing bladder,	3 00
To dressing wound and medicine,	62½

Dr. Crother's comment is that " sixty years ago the charges for surgical services bore a more just proportion to those for medical treatment than in this age."—*Medical Herald.*

THE TREATMENT OF SNAKE-BITE BY CALCIUM CHLORIDE.—The Indian Lancet for August 16th publishes the following abstract from the *Semaine médicale*: Phisalix and Bertrand reported the result of experiments with calcium chloride in cases of snake-bite at a recent meeting of the Academie des Sciences. Its therapeutic action is not, as Calmette thought, due to the

formation of some substance neutralizing the poison, or to its entering the circulation and there destroying the poison as it would in a test-tube, but it depends simply on its local effect; it destroys the poison locally, causes the tissue to slough, and so prevents absorption of the toxic material. Hence it is concluded that the injections of calcium chloride must be made deep at the actual spot where the fangs entered, and that they are useless if made in any other part.

A DISGRACEFUL EXHIBITION.—“Professor” Leeds, a hypnotist, has been giving exhibitions in one of the theaters in Philadelphia. As a “special feature” he put a victim into a sleep that was to last seventy-two hours, placed him in a store window in a prominent thoroughfare, and offered \$100 to any one who could rouse the sleeper before the time named. One man anxious to earn the money, failing to make any impression on the victim by tickling, prodding, etc., became desperate and struck him some heavy blows with his fist, without accomplishing his object, however, but injuring him severely. Just at this juncture the “Professor” arrived. He was ordered to arouse the man, which he did, when it was found necessary to remove him to a hospital. The man had been in the employ of the hypnotist for several weeks. It is high time some legal restriction was put upon these “professorial” exhibitors.

STATISTICAL NOTES FROM PARIS.—In March, 1891, the population of Paris was 2,424,705. According to the census taken last March it had risen to 2,511,955, being an increase of 87,250, or about 3.6 per cent. The strength of the “medical army” is said by M. Lucipia to be as follows: Medical men, 2,272; *officiers de santé*, 80; midwives, 1,150; dentists, 125; apothecaries, 987. There is consequently no lack of medical aid, but its distribution in the various quarters is very uneven. In the 20th arrondissement, for instance, there are only 29 practitioners, whereas in the 8th, which is the richest in Paris but one of the least populous, there are no fewer than 411 of the superior grade, and 5 of the lower. As for midwives, they abound wherever the population is dense and poor. One arrondissement, the 9th, possesses 33 dentists, but the 13th and 19th are entirely destitute in this respect.—*Lancet*.

A NEW TAPEWORM.—In the Journal of the College of Science of the Imperial University of Tokyo, Professor Ijimi, of Tokyo, and Professor Kurimoto, of Nagasaki, describe an enormous tapeworm which they modestly denominate *bothrioccephalus* sp. It measured ten meters in length and twenty-five millimeters in breadth at the broadest portion. Its expulsion was brought about with a dose of extract of male fern.—*N. Y. Med. Jour.*

INSPECTION OF EMPLOYEES' TEETH IN MATCH FACTORIES.—The Continental match factory of Passaic, New Jersey, has issued an order requiring all employes to show a certificate from a dentist testifying that their teeth are sound or that they have been satisfactorily repaired.

Special Notices.

THE BEST HYPNOTIC FOR PEDIATRIC PRACTICE.—The question as to what constitutes the best hypnotic for children can only be decided after careful study of both the advantageous and objectionable features of these preparations. Efficiency and rapidity of action should go hand in hand with safety and agreeableness of administration. While a perfect hypnotic has not been and probably never will be discovered, trional, according to many authors, more closely approaches to perfection than any remedy yet introduced. It is readily administered to children, does not affect the digestive organs, and acts rapidly, safely, and efficiently, the sleep produced closely resembling the normal. The little patient wakes refreshed and is not troubled with after-effects. Dr. Ruhemann (*St. Louis Medical and Surgical Journal*, June, 1896,) in an exhaustive article on trional cites a few instances of its prompt efficiency in pediatric practice which are well worthy of mention.

In several cases of cerebral concussion affecting girls, seven to ten years old, doses of 0.5 gm. trional in the evening had a very favorable influence upon the disturbances of sleep resulting from the horrible dreams, the crying out, and jactations. In a case of violent chorea trional controlled the existing insomnia, and even ameliorated the spasms. A nine-year-old girl, who one year previously had suffered for four months from chorea, had a severe recurrence during which muscular contractions were present even during nights' rest, with grinding of the teeth and repeated laceration of the mucous membrane of the cheeks, so that sleep was considerably disturbed. After exhibition of 0.5 gm. trional the contractions completely subsided and quiet sleep followed. At the same time a diminution of the violence of the spasms occurred during the day, so that after these and similar experiences it is certainly worth the while to employ small doses of trional repeated several times daily for the relief of chorea.

SANMETTO IN BRIGHT'S DISEASE.—Dr. C. E. Stafford, Trigg, Va., writing, says: "I have used Sanmetto with the very best results. I succeeded in making a case of Bright's disease much more comfortable by the use of Sanmetto, and am satisfied it should be used oftener in this disease. I regard Sanmetto as an efficient and elegant remedy for diseases of the genito-urinary organs.

I AM pleased to say that the most excellent preparation "Seng" has given me complete satisfaction. I can sincerely recommend it in all cases where such a delightful as well as efficacious remedy is indicated. It will afford me pleasure to speak of its merits on all suitable occasions. GEO. W. BABCOCK, M. D., Chelsea, Mass.

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THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXII. LOUISVILLE, KY., OCTOBER 31, 1896.

No. 9.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

GASTROSTOMY, WITH REPORT OF CASE.*

BY M. F. COOMES, A. M., M. D.

Professor of Physiology and Diseases of the Eye, Ear, and Throat in the Kentucky School of Medicine.

The operation of gastrostomy, or of making a mouth in the stomach, is not a new one. Some twelve or fifteen years ago, I did what was probably the first operation of the kind south of the Ohio River. The subject was a small white child, some two and a half years of age, who had swallowed concentrated lye; the result being stricture of the esophagus, and finally closure of the tube occurring some months after the primary injury.

At the time of the operation the child was almost moribund, but with all it lived twenty-one days and died of inanition. Its recuperative powers having been so thoroughly exhausted as to make it impossible for them ever to regain their normal condition. There was nothing peculiar about this case more than the fact that if I had known what is known to me and the profession in general to-day the child would not have died.

The operation would have been done earlier, which is always an important thing to be considered in connection with this work. A second and important thing to be considered is that of cleanliness. One of the dangers of death in this operation is septic peritonitis, which as you all know is usually fatal. Another important point in connection with this is the condition of the patient at the time of the

* Read at the June meeting of the Kentucky State Medical Society, 1896. For Dr. Coomes' remarks on exhibiting the case, see p. 343.

operation. If the patient is much exhausted rectal feeding should be resorted to, giving nutritious broths, milk, and brandy or whisky. It may be questioned as to whether this is advisable or not. I can assure you that I have recently seen most remarkable results from this procedure.

The case which I will now report is one that occurred in the person of a colored boy, five years of age, by the name of David Moore. He was the patient of Dr. T. D. Pound, of Wilsonville, Jefferson County, Kentucky. The boy was brought to me on February 14th, with the history of having swallowed concentrated lye some months previous, and of the gradual closure of the esophagus, and at the time which he was brought to my office he had not swallowed fluids or solids for six days, and of course was in a most deplorable condition, so far as strength and vitality were concerned. His cravings for food and drink were most pitiable. He showed all the evidences of rapid destruction by starvation. His eyes were secreting a peculiar muco-pus, he had that anxious, care-worn look, which is peculiar to persons suffering from hunger, and along with this hunger of course was his inability to sleep. Because no hungry person, particularly in the early stages of starvation, can sleep.

An attempt was made to pass bougie through the esophagus. The smallest, however, failed to pass. In other words there was complete closure of the gullet. An operation was at once determined upon. The consent of the parents was given, the boy sent to the Kentucky School Hospital, and liberally nourished through the rectum for forty-eight hours. At the end of which time he had rallied to a very great degree, and was indeed in moderately fair condition for an operation.

The operation was done on the seventeenth of February in the afternoon. I did what is known as Franck's operation, which is a novelty in method. The operation consists in making a clean cut down the linea alba, beginning an inch or so below the ensiform cartilage, or the cut may be carried down obliquely, as I did in this case, as will be observed in the cuts, or, more strictly speaking, to the edge of the rectus abdominis muscle. When the muscle is reached the cut is carried no further for the present. Then, going out a full inch from the first cut toward the edge of the ribs, another incision is made along parallel with the free border of the ribs. The ends of the two incisions are separated at the bottom to a greater extent than at the top, being about an inch at the top, and an inch and a half at the bottom. This

cut is also carried down to the muscle. Then the piece of skin and superficial fascia are lifted up with the handle of the scalpel, or, if necessary, the dissection may be made with the edge of the knife.



FIG. 1. The feeding tube in position.

cavity is opened through the line of the first incision, or in other words the first cut has been extended into the cavity of the abdomen.

This having been done, the stomach is pulled out through the opening and carried beneath the subcutaneous tissues that have been dissected up and brought up through the other wound, and as much pulled out as is thought necessary, and stitched to the lips of this second wound; which, as I said before, is simply a cut in the skin and superficial fascia—thus leaving that portion of the stomach which is between the two openings, so to speak, beneath the skin and superficial fascia on the one hand, and on the top of the rectus abdominis muscle on the other hand.

After the stomach has been stitched to the second wound the wound into the abdominal cavity is closed up around the stomach, the skin and superficial fascia being stitched over the stomach, and not to the stomach. This wound having been completely closed, the whole is dressed with iodoform and iodoform gauze, being sure to put on a goodly quantity of the gauze, so as to prevent the possibility of any infection from the outside. A good bandage is placed around the entire body, and the operation is completed.

The stomach is not opened at this time. At least it is considered best not to open the stomach at the primary operation, for the reason that there is less shock and less liability to have the primary healing of the wounds interfered with by an overflow of the contents of the stomach.

In this case the stomach was not opened until four days after the primary operation. At the primary operation there should be always two ligatures placed superficially in the walls of the stomach, so as to indicate the point at which the opening into it should be made. This is a matter of very great importance, as it is exceedingly difficult in most cases to tell just when you have entered the cavity of the stomach. There is always more or less swelling around the lips of the wound, and the area of the stomach exposed is not large, and unless a guide is at hand the result is great confusion in the mind of the operator as to where the cut should be made. And further, after the cut has been made, it is understood that unless you have some positive guide you can not tell whether you are cutting directly through the wall of the stomach or whether you are splitting its wall. In the latter case, of course, you would not get into the cavity of the stomach at all, and would really be doing an injury to your patient.

But, with the precaution of placing ligatures in such a position that, when you wish to cut, you know that your cut, if it opens into the stomach, has to be made directly between these two ligatures there can be no confusion and the work will be rapidly and easily accomplished.

Further, the blood-vessels in the walls of the stomach should be noted at the time of the placing of these superficial ligatures for guides, because you do not wish to cut a large blood-vessel. The arteries are readily seen, and it is an easy matter to locate the site that you wish to make your opening at, by noting the position of the arteries and placing your ligatures so as to enable you to cut between blood-vessels instead of cutting across them.

It is not necessary to do this second operation under the influence of a general anesthetic, cocaine serving every purpose admirably, and giving you the advantage of having the patient's intelligence to guide you, which is very essential even in small children; and further, you have no vomiting, which might occur if a general anesthetic were used.

The amount of fluid to be placed in the stomach at the beginning is a matter of very great importance. It must be remembered that the stomach has been comparatively inactive for quite a while preceding all these operations, where they are done for the purpose of feeding the patient, and that the introduction of a large quantity of food at one time would of necessity bring about bad results. Further, in cases of long standing the stomach no doubt has been contracted and its capacity is limited. The milk or broth that is introduced should be warm, brought up to a temperature of fully one hundred, so as to economize in the work of preparation for final assimilation, as it requires an effort on the part of the body to increase the temperature, and whatever is gained in these cases is so much saved to the patient. In many instances, as in this, it was quite an item; although the boy was strong enough to sit up, it would have taken but little to have brought about disastrous results so far as life was concerned.

The amount of food given should be small in quantity and at frequent intervals, until finally the patient's own appetite will regulate the amount to be introduced. In this case we have been unable to get the patient to masticate food and pass it down through the tube, as is done in many instances. He has persistently refused to do this, and prefers to take the funnel and fill his stomach up, thus saving any trouble of mastication, etc.

I present the case that you may all see the result, which to my mind is perfect as such can be—not because I did the work, but because it is one of those things that occur in all kinds of surgery—the ideal has been obtained.



tube was misplaced in the wound. By being misplaced in the wound, I mean the tube was bent into such position as to enable the fluid to pass out by it for the time being. You will note that the withdrawal of the tube is not followed by any fluid from the stomach.

Some days ago, at the Kentucky School of Medicine, I poured quite a quantity of milk into the stomach to demonstrate the fact that milk was rapidly coagulated by the gastric juice, and then endeavored to force it out by making pressure upon the abdominal walls, but failed to get any fluid whatever. I was compelled to introduce the tube and pump out a portion of the contents of the stomach.

Again, I tried to force the fluid out by pressure by turning and rolling him about on the table, but was utterly unable to get any thing beyond a few drops of gastric juice, thus showing that I have made a complete valve in doing the operation, which is the object desired in all such cases.

The boy has never had a rise of temperature or an unfavorable symptom of any kind from the moment of the operation until this time. There has been no pus in the wound at any time. It has always been as clean as it is possible for such a wound to be, healing up rapidly and remaining in the condition that you see it at present.

I have induced the mother to come with the boy, that the members of the society might witness the result of this simple operation, which I take it for granted that any ordinary surgeon might do. As I said before, there are two points to be remembered: One is to keep thoroughly clean, as the great danger is septic peritonitis; the other is to do a secondary operation, unless the case is an urgent one, when the stomach may be opened at the time of the primary operation.

I believe that in the majority of cases the patient may be fairly well nourished for four or five days by rectal feeding, and I really see no reason for the immediate introduction of food into the stomach, and would advise in all cases to wait as long as four days before doing the secondary operation.

Another point is the removal of stitches from the primary wound. I think there need be no hurry about this, certainly not sooner than six or seven days. If the stitches become loose, which can be easily discerned, then it is safe to remove them. In fact I believe that the stitches do but little good after four or five days, but as a matter of precaution I would not advise their removal at that time, because you can not tell what will happen to the patient, vomiting, accidents of one

kind or another might result in loss of adhesion between the stomach and the lips of the wound.

Such an accident of course would be undesirable, but would not be difficult to handle. I take it for granted that in no case would the stomach be pulled back into the abdominal cavity, and so long as a portion of it remained outside, it would be an easy matter to cocaine the lips of the wound and restitch it to its original place.

Remember that the passage from the external hole into the stomach here is oblique, passing first under the skin between that and the rectus abdominis muscle. After passing to the inner edge of the rectus muscle the opening turns down at almost right angles into the cavity of the stomach, so that you have the valve arrangement between the skin and the muscle, as I mentioned in the first part of this paper.

LOUISVILLE.

THE SCIENTIFIC AND COMMON-SENSE TREATMENT OF TYPHOID FEVER FROM AN ETIOLOGICAL AND PATHOLOGICAL STANDPOINT.*

BY G. G. THORNTON, M. D.

As the medical profession of the present is somewhat inclined as were the Athenians of old in regard to seeing and hearing something new, I shall only presume to occupy a short portion of your valuable time with a few thoughts in regard to that very old subject, Typhoid Fever.

And as this is an age in medicine when an article that does not contain the announcement of some specific, or of something startling or sensational in the way of an operation, falls flat on many a medical mind, it may not be amiss for me to say in the beginning that I do not propose to offer for your consideration any specific for this disease, which perhaps knows no bounds, but is co-extensive with civilization if not with the population of the globe—which claims for its victims those of all ages and all races, leaving in its wake heartaches among the high and low, the rich and poor, saint and sinner, for those who mourn the loss

seen in the very beginning, the prognosis in cases of typhoid fever that are not complicated from the beginning should be favorable, and the mortality should be *nil* if given the proper medical and hygienic treatment. And I hope that this paper may aid some of you at least to a better understanding of the rational treatment, and thereby enable you to approach nearer the ideal in treatment.

In order that I may make the line of treatment plain and show the "whys and wherefores" for what is done, it will be necessary for me to say a few words as to the etiology and pathology, just to freshen your minds on those points. I think it will not be going beyond the facts to say that most of the profession are now agreed as to the germ theory of disease, and believe that the bacillus of Eberth passes in the dry state by inhalation into the fauces and thence finds its way into the small intestine, or that it finds its way there with the water we drink or the food we eat, where it finds lodgment in Peyer's patches. Here it begins to multiply and to generate the typhotoxin; this is absorbed and gives rise to the various early symptoms of the disease, and as the multiplying process goes on new glands are invaded and more of the poison is generated and absorbed, and thus from day to day the symptoms become more and more pronounced, till finally resolution begins in the first glands to be invaded, and as the generation and absorption of the poison become less and less the fever declines as gland after gland undergoes resolution, just as it rose higher and higher when they were undergoing invasion. This theory is confirmed by *post-mortem* findings, as the different glands are found to be in different stages of invasion and resolution.

When the bacilli have thoroughly "worked a gland," if I may use the expression, either resolution takes place or the stage of necrosis develops and the pus germ gains admittance, and a slough is formed which, when detached, leaves an ulcerating surface which may extend to or even through the serous coat and cause hemorrhage or perforation with the resulting peritonitis.

In the beginning when the bacilli have just invaded one gland, or a number as the case may be, and before they have begun to generate their peculiar poison which has such a depressing effect on the nervous system, the disease is purely local, and only becomes systemic after the absorption of, not the germ itself, but its product, the typhotoxin. The ulceration and consequent hemorrhage or perforation are the result of the invasion of the pus germ which was given the opportunity by the specific germ.

On the etiology and pathology as given we can explain the various symptoms and phenomena of this disease, and can base a rational line of treatment, and on no other hypothesis can it be done. By the symptoms separately or collectively, as the various stages take place, we mark the process by symptoms indicating such stages: The tenderness in the iliac region or around the umbilicus with a tendency to diarrhea, indicating an enteritis, the malaise and gradual rise of temperature from day to day indicating the absorption of more and more of the specific poison, and finally the gradual decline of these symptoms following naturally the course of the process in Peyer's patches, the hebetude and other phenomena of the nervous system being the result of the specific poison on the brain and brain centers and not entirely the result of the high temperature, as we often see as much elevation of temperature in other diseases without the same results.

By this theory we can also explain its insidiousness, which is perhaps equaled by no other disease, not even that sneaking disease, consumption. Beginning locally at a small focus and gradually extending over more and more of the gland or glands primarily involved, and then extending to other glands, the toxin being generated slowly in the beginning, but as the process goes on, more rapidly later, and as absorption takes place gives rise to systemic manifestations which keep pace with the local process.

With the etiology and pathology and various changes in mind the treatment can be lifted from the pale of empiricism and uncertainty to the realm of rational scientific management, which it was not possible to do when most of us began the treatment of this disease. Only a few years ago we said to our patients with this disease, "You are a ship at sea, the fever is the raging storm, I am captain of the vessel, I am powerless to mitigate the severity or shorten the course of the storm, but what I can do is to manage the vessel, clear the deck and trim the sails, in the best possible manner, strengthening this part and bracing that, hoping the ship may weather the storm and that all may be well in the end." This was the expectant plan, treating symptoms and letting the disease run its course, which it did by invading gland after gland till there were no more to be invaded, just as the fire in the knobs comes to an end when all the leaves have been consumed.

In passing now to the treatment of the present, I wish to say that typho-malarial fever is a misnomer, so far as this section of the country is concerned, and I believe that all cases that have been so regarded

have been either typhoid or simple malarial, or typhoid complicated by malarial, or *vice versa*, and not a malarial fever with some of the characteristics of typhoid. The custom of calling all the cases that do not have the more serious symptoms, typho-malarial, and only making a diagnosis of typhoid when they do develop, often presents the anomaly of the same cause producing the two different diseases in different members of the same family. Whereas, if we regarded them all as typhoid, some mild and others severe, we could explain the difference by difference in the constitution or in the state of the system, just as we could explain the difference between a field of corn in a rich bottom that had been well cultivated and a field on a poor hillside that had been poorly cultivated.

The first point of great importance in the proper and successful treatment is an early diagnosis. And in order to make this possible we must see our patients early and be on the alert for the first symptoms—the headache and that tired, lazy feeling—which they almost invariably think they can work off, and which they often try to do before consulting a doctor, much to their detriment. Our patients should be taught, so far as we can do so, the great importance of beginning early, and that he who goes to bed earliest gets well quickest, and that but few indeed can wear the disease out by refusing to go to bed. That tired, lazy feeling, with aching head and limbs, a slight elevation of temperature and looseness of the bowels may always, in the absence of any other palpable cause, be set down as the fever and treated accordingly, as by so doing we run no risk of doing wrong, develop what may.

The first thing after a diagnosis, or the suspicion of a diagnosis, is to insist on our patients going to bed.

The second is to put his system in the best possible condition for the battle with disease on one hand and his powers of resistance and medicine on the other. This can be done if seen early (*a*) in no better way, perhaps, than by giving $\frac{1}{2}$ gr. calomel every hour till three doses are taken, and then every three hours until a good, free evacuation is produced, and then, if there continues to be an inclination for the bowels to move every four or five hours or oftener, give from $\frac{1}{4}$ to $\frac{1}{2}$ gr. pulv. opii and 5 to 10 grs. bismuth subnitrate after each evacuation till the discharges are limited to one daily. (*b*) Relieve the aching of the head, the back, and the limbs by giving a capsule containing from 4 to 6 grs. each of acetanilid and salol from four to six hours apart, according to the relief afforded.

The third object in this line is to see that my patient is not annoyed by overanxious friends and overofficial company. The good old times when families went to sit up with the sick have passed away, in my practice at least; and, as they have, the fourth object to be aimed at is more easily accomplished than in days of yore, viz., giving my patient sweet, undisturbed sleep. Sleep is indeed "Nature's sweet restorer," and though our patients may do without food for weeks they can't do without sleep and water for any very considerable length of time without very serious results. If sleep don't come naturally I usually have no trouble in procuring it with 15 grs. chloral hydrate and 10 to 20 drops deod. tr. opium, and repeat in half the dose if needed in an hour.

In addition to the above, as our *confrères*, the surgeons, have derived such wonderful results from asepsis and antiseptics, we use the antiseptic treatment, and there is little doubt it will give us as marked results when properly used as it does them. But what should we expect of the antiseptic plan? Should we expect any antiseptic to pass through the stomach and several feet of the small intestine and reach the diseased gland and have such an affinity for the germ that it will penetrate the mucous covering and the inflammatory breastwork and destroy the germ behind this necrotic coat of mail? Nay, verily, that would surely be too much, for any medicine that would destroy the germ hidden away at work within the gland would be too corrosive to have passed over the mucous membrane of the stomach and bowels and have left them unharmed. Indeed, if we had the affected surface where we could apply the antiseptic directly to the glands, could we hope with any antiseptic suitable to be given internally to destroy the germ *in situ*? I think not. Well, what are we to do then? Simply this: Render the contents of the bowel aseptic by the use of antiseptics, and thus make it unhealthy for any wandering germ that might be seeking green pastures in some other gland that has not been invaded. By thus confining their work to the glands primarily involved we cut the disease short, our patients getting out in from ten days to three weeks instead of from six to ten weeks as under the old treatment.

Now, what antiseptic will do this? Probably several; but those on which I place chief reliance are salol, sulpho-carbonate zinc, and acetanilid. Acetanilid given in from 4 to 6 gr. doses relieves the aching of the head, back, and limbs, quiets the nerves, reduces the temperature, and produces a not unpleasant diaphoresis, and besides no doubt helps the salol to render the contents of the bowel aseptic. The salol prob-

ably passes the stomach before it is dissolved, and thereby has a more concentrated effect in the bowel. The sulpho-carbolate zinc, which can be given in from 2 to 4 grain doses in solution every three to five hours, has an antiseptic and astringent effect which acts very happily in diminishing the tendency to diarrhea. And at this place I want to say a few words as to the evil results of diarrhea in this disease. No doubt a good, free medicinal evacuation early in the disease is beneficial, but a diarrhea never is, and it is especially liable to cause trouble any time after the second week by the increase of the vermicular motion of the bowels and the constant flow of their contents over the diseased surface, thus tending to cause the too early detachment of the slough, thereby increasing the danger of hemorrhage and perforation. Acetanilid given in from 4 to 6 grain doses in from two to four teaspoonfuls of whisky, together with sponging of the hands, face, and abdomen with water as cold as feels grateful, repeated from four to six hours apart when the temperature runs above 103° , will usually keep the patient reasonably comfortable and the temperature under control.

The diet should be liquid throughout the course of the disease and for at least one week after the temperature has fallen to normal. Imprudence in eating too much of something which the stomach could digest in small quantities, or the eating of some indigestible substance may undo all that has been done and thus bring about a relapse, which is usually the result of some indiscretion in diet.

I purposely refrain from saying any thing of the "Woodbridge" and "Brand" methods, as I have had no experience with either.

GRAVEL SWITCH, KY.

TRANSFUSION, INFUSION, AND AUTO-TRANSFUSION; THEIR COMPARATIVE MERITS AND INDICATIONS.*

BY AUGUST SCHACHNER, M. D., PH. G.

Whenever a number of measures of a more or less varied and changeable character are advanced for the fulfillment of a long-existing demand, it means an absence of unity in the selection of the proper measure and a general distrust in a satisfactory adjustment of the demand. This is clearly illustrated by the number of measures that from time to time have been recommended to overcome the depressing and even fatal condition following enormous hemorrhages.

* Read at the June meeting of the Kentucky State Medical Society, 1896.

The fact that the operation of transfusion is but rarely performed at the present time, and that of infusion faring but little better, has tempted me to refreshen the subject, somewhat more than a month ago, before one of our local societies. Since that time I have been impressed more than ever with the neglect to which these operations have been subjected and the importance of bringing them vividly before the eyes of those engaged in operative work.

I may be pardoned for borrowing from my former paper the historical outlines in connection with the development of these minor operative procedures. The first intimation of transfusion can be found in 333d and 334th verses of the seventh book of "Ovid's" *Metamorphoses*, "*Veteremque haurite cruorem ut repleam vacuas juvenili sanguine venas.*" This carries us back to the time of Christ, and from thence down to the present period a long but unbroken chain can be traced running through the Hebraic and Egyptian medical records.

In 1492, or more than a hundred years before the circulation was understood, Pope Innocenz VIII was struggling with his last illness. He was attended by a Jewish physician who, it is supposed, was prompted by the idea noted in the verses of "Ovid," and performed transfusion with the blood taken from three Roman youths. In 1615 Andreas Libavious, of Halle, wrote an article upon a charlatan who is supposed to have performed transfusion. In 1628 another appeared under the authorship of Johann Colle; coupled with these came the discovery of the circulation by Harvey, which was directly responsible for the vigorous attention which the learned men at that time gave to the subject.

In 1652 an apparatus for arterio-venous transfusion was contrived by Folli, of Italy. In 1666 Richard Lower drained a good-sized dog by tapping the jugular vein. When the animal was exhausted he filled the vessels with blood drawn from a cervical artery of a second dog until the animal had recovered, he then drained the same animal a second time and again filled his arterial system with blood from a third dog, thus completely changing the blood twice in the same animal without any unfavorable consequences. This represents the first well-

be transformed to the youthful, and the immoral could be changed to the moral. So strong was the belief in the latter that a trial was actually undertaken by Lower and King.

At that time a thirty-year-old religious fanatic, by the name of Arthur Boga, offered himself, in consideration of a guinea, as willing to undergo the experiment, which was conducted in the presence of the Bishop of Salisbury and a large and brilliant audience by Lower and King. Six to seven ounces were withdrawn and ten ounces of arterial blood from a sheep was injected. This operation was again successfully performed on the twelfth of December of the same year by the same operators.

It must be noted, however, that these experiments were preceded by others performed by Jean Dennis and Emmerez in Paris in the year 1667, and to whom the honor of the first successful transfusion upon a human subject is due. Dennis employed the blood of a lamb, and several times repeated the operation upon several different subjects with almost uniform success so far as the transfusion was concerned. These operations aroused a vigorous and jealous opposition in Germany, France, and Italy, and were partly terminated when Dennis narrowly escaped a trap that had been set for him; but notwithstanding his innocence it had involved him in a criminal case.

From this time the enthusiasm began to lag and matters continued with a varied interest until 1818, when James Blundell, the obstetrician, placed transfusion upon a scientific basis, at the same time giving a method for its correct performance. To Blundell is likewise due the honor of first employing human blood instead of that of lower animals for the transfusion. With this the history of transfusion can be dismissed. In parting we might add that there are but few procedures known to medicine whose histories are more replete with incidents that are as varied, interesting, pathetic, and amusing as the history of transfusion.

Before entering upon the subject of transfusion it is well to glance at the conditions which are produced by the loss of large quantities of blood. In dangerous hemorrhages death may ensue from one of two causes, either from the absolute loss of blood itself or from a fatal reduction of the intravascular pressure. In the first instance the amount of blood is insufficient to meet the demands necessary for the sustenance of life. This makes the case unmistakably clear, and the indications are more blood, or death must ensue. In these cases

nothing short of transfusion will fulfill the requirement; fortunately, however, these constitute the minority. In the majority of cases the death following hemorrhage is not due to the direct loss of blood itself, but rather to a disturbance in the mechanism of the circulation. Let us glance at the physiology of the circulation.

Two factors must be considered: First and foremost, the force of the heart, and second, the elasticity and contractibility of the arteries. If the heart has an insufficient volume of blood, or perhaps, more properly speaking, of fluid—for blood is not absolutely necessary for this feature—there is an irregularity in its contractions and a serious crippling in the proper working of its valves, and in consequence we have a condition at once produced which for the time being can be compared to the worst variety of valve lesion, so that the heart not only fails in sending out the required amount for the proper nutrition but also for the closure of the valves. Aside from this the amount of blood sent out is not sufficient to produce the necessary dilatation by means of which the elastic nature of the large arteries are enabled to propel the force of the heart to the more distant parts of the body.

When this state of affairs exists the indication for an increase of the intravascular pressure is equally plain, and the requirement then is more fluid; whether that be blood or salt solution is immaterial.

Transfusion. By transfusion we mean the injection of the blood of one individual into the vessels of another. Although this operation has been variously designated by different writers as both safe and unsafe, there can be no doubt that in the hands of a careful operator all possible elements of danger can be readily eliminated.

Indications. From the history of transfusion it is apparent that formerly its range of application was far more extensive than its merits justified, and in view of this state of affairs the disappointments naturally were quite frequent. This largely aided in relegating it to the disuse to which it was subjected. At present any factor may serve as an indication for transfusion which reduces the quantity of the blood so that the remaining volume is unable, either by reason of the reduction or incapable by reason of any alteration to which it may have been subjected, to carry on the functions necessary for the sustenance of life. The principal conditions which such a statement would comprise, would be either an acute anemia dependent upon an extensive hemorrhage or a paralyzation of the oxygen carrying power of the red corpuscles by carbonic oxide or other similarly toxic gases. We would

scarcely still regard such conditions as morphine or atropine poisoning, leukemia, chlorosis, and a host of other pathological states as justifiable indications for the employment of transfusion.

Modus Operandi. There are a few practical features in connection with the operation of transfusion which deserve special attention. During the cholera epidemic of 1866 Von Graefe raised the question as to whether the centrifugal should be given the preference over the centripetal method. Whether it would be better to inject the blood into the arteries rather than into the veins? The advantages urged in support of the centrifugal method were that since the capillaries intervened between the arteries and veins, the blood in its passing through the capillaries was subjected, as it were, to the influence of a strainer which safely withheld any air or emboli which might be present in the transfused blood, the arteries which were employed being either the radial, tibial, or even the brachial. Although this method has the indorsement of Billroth, Heuter, and others, it has likewise many very able opponents who have pointed to the force necessary for the centrifugal method, which not infrequently resulted in a rupture of the capillaries with accompanying gangrenous condition.

Another question to be decided is whether or not the blood should be defibrinated and whether we should select the venous or the arterial blood. Referring to the former of these two questions, we are safe to say that the verdict is almost unanimously in favor of the defibrinated blood. It has been said that the integrity of the corpuscle is considerably affected by the defibrination of the blood, but this is almost problematic; at any rate the dangers of a partial or an entire coagulation which attend the use of non-defibrinated blood fully justify the defibrination.

As to the second question, there are reasons why the venous blood is to be preferred to the arterial; namely, the veins are more accessible than the arteries. The tapping of a vein is simpler and is attended with less subsequent danger than accompanies the opening of an artery; besides the blood, although venous in character, rapidly becomes arterialized during the act of defibrination. In addition to these we might ask, should the transfusion be direct or indirect; that is, should the blood pass directly from the vessels of the donor into the vessels of the receiver without any exposure to air? To this we are inclined to say that we believe it to be far safer to employ the indirect method.

The extreme tendency on the part of the blood to coagulation, and

the grave result which attends the introduction of even a minute emboli, not to speak of the chances of the introduction of air, even at the hands of a careful operator, makes us hesitatingly declare in favor of the indirect method.

Should the transfusion be undertaken for the relief of a poisoned condition of the blood, such as results from the exposure to carbonic oxide gas, the individual should be subjected to venesection before the transfusion is undertaken. In the performance of the operation no elaborate outlay of instruments is necessary. Two or three bowls, a reversible aspirator, a glass rod, and a scalpel, all of which being in a perfectly aseptic state, will fill the requirements. Every thing in connection with the operation must not only be perfectly aseptic, but must be heated to 105° or 110° F. When all is in readiness the blood is withdrawn from the arms of one or two donors into one of the aseptic bowls, the amount varying from five to fifteen ounces, according to the circumstances of the case. It is rapidly defibrinated by whipping it with a glass rod and then straining through a piece of sterile gauze into an aseptic bowl. This whipping may be carried out for a minute and a half before straining, but still better is to whip it for a minute and strain, whipping it a second time and again straining through a fresh piece of gauze. It is needless to emphasize that the actual operation must be performed within two or three minutes, and that the greatest care must be exercised that all of the air has been forced out of the syringe and tube before the injection is commenced.

Dangers of Transfusion. The possible dangers that may attend the operation of transfusion are phlebitis, sepsis, emboli, and the introduction of air into the veins; from the foregoing, however, all of these can be readily eliminated if the operator exercises care in the transfusion.

Infusion. By infusion we understand the introduction of non-sanguineous fluids into the circulation. Although the popularity of this measure is out of recent date, its real history, however, can be traced as far back as the year 1677, when Johannes de Muralto, of Zurich, practiced the injection of milk into the vessels of one of the lower animals. The term infusion, however, as applied to-day, carries with it the idea of a salt solution having the same strength as the serum of the blood. The advantages of this operation over that of transfusion are manifold, especially since death in the majority of instances is not due as much to the insufficiency of the remaining quantity of the blood as it is to a disturbance of the mechanism of the

circulation. By the use of the salt solution the dangers common to transfusion are all minimized, and especially the danger from emboli is entirely absent. This widens the field of its usefulness, so that the indications for its use are not wholly confined to conditions following alarming hemorrhages, but includes any pathological state attended with a feeble pulse which is dependent upon a diminution of the intravascular pressure which makes it one of our most valuable measures for combating profound shock.

This property of restoring the tone in a shock condition is not entirely due to the increased intravascular pressure, but also to the stimulating influence which the salt solution has upon the heart. This fact, however, has not received the recognition which it deserved, for it has been but a little more than a decade since it has practically received any attention.

In the year 1881 transfusion lost most of its esteem as a life-saving measure in alarming hemorrhages. At this time E. Schwartz published his paper, "*Über den Werth der Infusion Alkalischer Kochsalz Lösung in das Gefäss System bei Acutes Anämie.*" From this time the adherents to transfusion have been leaving that side in favor of infusion, not that the latter can ever completely replace the former in every case, but because it can successfully replace transfusion in most cases, and where such is possible it is always given the preference owing to its greater safety and convenience. In view of these advantages it is proper that we employ the saline infusion in all alarming hemorrhages.

This operation is uniformly followed by an improvement in the circulation. Should, however, the improvement in the circulation last but a brief interval, it is plain that the amount of blood remaining is incapable of carrying on the conditions necessary for life, and then it is evident that transfusion must be performed in addition to infusion.

In addition it has been pointed to by other authors that the saline infusion protects the internal organs from a too rapid and extensive abstraction of their parenchymatous fluids, which nearly always occurs after an extensive hemorrhage.

By saline infusion we mean the injection of a solution of sodium chloride having the same strength as the serum of the blood, that is, 0.6, into the veins of the bloodless subject. Some add to this a trace of sodium hydrate or sodium carbonate, while others contend that this addition is unnecessary and that, should either the carbonate or hydrate exist in proportion more than a trace, their presence would positively

become injurious again; others dissolve the salt in a weak saccharine solution, or the infusion has been successfully carried out by Thomas and others with pure fresh milk.

As for the proper performance of infusion there are several features to be observed. First of all, the solution should have a temperature of about 100° F. Again, the infusion must be made with a slow, steady, and not too strong a stream; should too much force be employed there is danger of over distension of the right side of the heart, and in consequence thereof a paralysis may result. Ordinarily sufficient force is obtained by raising the funnel or the vessel containing the solution to the height of an ordinary arm's length; should this convey the solution with too much force, the latter can easily be regulated by lowering the container to the desired level. As for the quantity to be employed, this must depend upon the nature of the case. In every instance it is not necessary to employ as much solution as the amount of blood lost; all that is required is to inject just enough of the solution to restore the tone of the circulation. Ordinarily, twelve to fifteen ounces can be considered as the minimum quantity to be used for ordinary purposes, but from twenty to twenty-five ounces may be used in alarming hemorrhages. The use of enormous quantities of salt solution should be discouraged, since they dilute the blood to such a degree as to unfavorably influence the red corpuscles.

The operation itself can be divided into three stages: First, the exposure of the vein preferably at the bend of the elbow. This is too well known to require repetition here. In the second stage there is one feature that deserves emphasis, the transfusion tip should only be introduced into the vein while the fluid is running. The observance of this precaution not only washes apart the lips of the opening in the vein, but affords an absolute safeguard against the introduction of any air, which is one of the chief dangers associated either with transfusion or infusion. The third step consists in ligating the punctured vein and applying an aseptic compress.

The principal points in connection with the operation are: To have all steps performed in an aseptic manner, so be careful that the infusion is not made too rapidly, nor with too much force, otherwise there will be danger of overdistending and paralyzing the already much enfeebled heart. Care should also be exercised that too much fluid is not employed, which might give rise to a two-fold danger: First, by the unfavorable influence upon the corpuscles by the dilution of the blood.

Secondly, by raising the intravascular pressure to such a degree as to occasion a rupture of one of the smaller vessels in some vital part of the economy. Lastly, it is exceedingly important that great care should be exercised to have the salt solution absolutely free from any minute floating bodies, which if present might act as emboli, producing death or perhaps a gangrene of one of the extremities.

Before dismissing the subject of transfusion and infusion we desire to recall the fact that owing to the extreme cerebral anemia which exists after dangerous hemorrhages, either of these operations can and should be performed without the use of an anesthetic device; in this condition all manipulations are practically of a painless character; and, owing to the enfeebled heart, such operations would only be adding an additional danger.

Auto-transfusion. By auto-transfusion we understand the forcing of the blood by means of elastic bandages from the extremities to the more vital centers. The indications for this can be summed up as follows: Shock or any condition attended with relaxation and diminished vascular pressure. Again, this is very useful in guarding against accidents in anemic subjects during chloroform narcosis.

In conclusion I beg to submit the following:

1. In enormous hemorrhages the resulting dangers are more frequently due to the reduced intravascular pressure than to the actual loss of blood.
2. In view of this the indications point more decidedly toward infusion than transfusion.
3. That transfusion has not received the attention which its merits justify.
4. In transfusion we possess a measure which in the severest hemorrhages is the only agent capable of restoring the vital functions.
5. The indications for transfusion include any condition which reduces the total quantity of blood to a fatal degree, or which alters the character of the blood to such an extent as to render it incapable of carrying on life.
6. When the transfusion is performed for the relief of a poisoned condition of the blood it should be preceded by venesection.
7. Centripetal is to be preferred to centrifugal transfusion.
8. In centripetal transfusion the injection should be made with a slow, steady stream, carefully exercising no undue force.
9. In withdrawing the blood from the donor the veins afford an easier, safer, and better source than the arteries.

10. Indirect transfusion with defibrinated blood is safer than direct transfusion with non-defibrinated blood.

11. In alarming hemorrhages infusion should be performed before transfusion; should, however, the improvement be transient in its nature, the infusion must be supplemented with transfusion.

12. In addition to hemorrhage the indications for infusion include any pathological state attended with a feeble pulse which is dependent upon a relaxed condition and a diminished intravascular blood pressure, namely, shock.

13. Restoring the tone of the circulation by infusion is not wholly dependent upon the increase of the intravascular pressure, but is in part due to the stimulating influence which salt solution has upon the heart.

14. In performing transfusion or infusion after an enormous hemorrhage the use of an anesthetic is not only unnecessary but absolutely dangerous.

15. In the auto-transfusion we have a valuable measure for combating shock and preventing accidents in anemic subjects during chloroform narcosis.

LOUISVILLE.

INJECTIONS OF HORSE'S SERUM IN SYPHILIS.—A. Lourier (*Journ. des Mal. Cutan. et Syph.*) reports the results of a series of clinical experiments on the action of animal serum in syphilis made by Stoukownikoff, of Kieff. He used the serum of healthy horses, that is to say, of horses which had not been inoculated with syphilis. It was found that in spite of the treatment the changes in the blood produced by the syphilitic poison went on absolutely unchecked; in other words, the injections of the serum had no curative effect on the process. Comparing these results with those of mercurial injections it was found that while the serum treatment did not stop either the diminution in the number of red corpuscles and in the amount of hemoglobin, or the increase of white corpuscles, the mercury almost immediately brought about a marked increase in red corpuscles and hemoglobin, and a decrease of leucocytes. The objective phenomena observed in the patients (7 in number) confirmed the inefficacy of the serum; in none of them did condylomatous lesions disappear; in some indeed roseola did disappear, but only to give place to papules. The author sums up by saying that his experience lends no countenance to the notion that the normal serum of the horse has any specific effect, or any action on the organism attacked by syphilis. Full details of the observations are given.—*British Medical Journal*.

Reports of Societies.

KENTUCKY STATE MEDICAL SOCIETY.

Stated Meeting, June 10, 11, 12, 1896, John C. Lewis, M. D., President, in the chair.

[CONTINUED FROM PAGE 266.]

Dr. Martin F. Coomes, of Louisville, read a paper entitled a Case of Gastrostomy. [See p. 321.]

DR. MARTIN F. COOMES, Louisville, presenting the patient: This case is one of gastrostomy. It is one of those cases in which there had been a bad stricture for six days preceding the sixteenth of January. The child had not swallowed any thing, and was brought to me in Louisville almost dead from starvation. I fed him for twenty-four hours by the rectum with milk and brandy until he had recuperated sufficiently to have an operation performed, when I anesthetized him, and the operation which I performed was that known as the Frank operation, but modified by me. I have an illustration here on this piece of cloth. In making the incision I followed the rule laid down by Frank of making a vertical incision. You will notice that the incision is made diagonally, the upper part of it beginning in the middle of the abdomen or median line and extending down. The first cut extends through the skin and superficial fascia. Then I immediately went out toward the ribs an inch or more, extending through the skin and superficial fascia, then I joined the two cuts by dissection. After that I finished my cut, went into the abdominal cavity, pulled the stomach out into the external wound through the first incision, then carried it down under the skin and superficial fascia, got it out into the second incision, and stitched it fast around the second incision. I then closed the abdominal wound and dressed it with iodoform gauze. The child has not had from the beginning of the operation any leakage until two weeks ago, and this was due to a misplacement of the tube; I should have fastened the tube in such a way as not to be displaced. The boy plays with other children. You will notice that I have a perfect valve.

Some two weeks ago, instead of killing a good dog, I took this little patient and exhibited him before the class. I filled his stomach up with milk and showed the students how the gastric juice coagulates

milk. If I poured milk into the child's stomach, took out the tube, and rolled him over the milk would not run out. I might say that I could not get a drop of milk out of him until I put the tube in and pumped it out. So you see I succeeded in establishing or making a valve. It is one of those cases where we get the results of an ideal operation.

Dr. McMurtry has a paper on this subject which he will read this afternoon. I did not know that he was going to read the paper, otherwise I would have presented this case in connection with it. He made a successful operation upon his patient.

The first thing in connection with these operations is to be clean in order to prevent suppuration or infection taking place. The next thing is, when shall we open the stomach? If we have an emergency case I would open it then and there; and let me say to you, who have not done the operation, that it is a very simple one. Any ordinary man ought to do it. If you do not open the stomach at the time the operation is performed you will find, unless you cut in as I have done and indicated on this cloth, two little ligatures which come together at the pit of the stomach marking the place where you are to cut. If you are not careful you will find large blood-vessels in the stomach are not so situated in a way that you can insert your ligatures, so that when you go into the stomach and should cut a blood-vessel you have to stop and twist it to prevent hemorrhage. In an anemic child you either have to twist or ligate the vessel. Cocaine is sufficient for the anesthetic.

Dr. G. G. Thornton, of Gravel Switch, Ky., read a paper on *The Scientific and Common-Sense Treatment of Typhoid Fever from an Etiological and Pathological Standpoint.* [See p. 328.]

DISCUSSION.

DR. JOHN G. CECIL, Louisville: We ought never to let the subject of typhoid fever go by without saying something. I rise to express my commendation of the excellent paper of Dr. Thornton. It is hardly necessary to enter upon a discussion of a subject upon which we are so thoroughly in accord as I am with the essayist. There is one point in which I would differ with him, and that is in regard to the use of acetanilid to control fever and headache. I believe we can accomplish the same result, with less depressing effect upon the heart, which is of very great importance, by the use of water. Water, as it

is applied by Brand and others, is perhaps one of the most recent and effectual means of treating typhoid fever. I therefore believe that we can control the fever absolutely by the use of water. At the same time I do not believe there is any one who will claim that baths will in any way depress the heart.

[TO BE CONTINUED.]

Reviews and Bibliography.

A Text-Book of Bacteriology. By GEORGE M. STERNBERG, M. D., LL. D., Surgeon-General, U. S. Army; Ex-President American Public Health Association; Honorary Member of the Epidemiological Society of London, of the Royal Academy of Medicine of Rome, of the Academy of Medicine of Rio de Janeiro, of the Société Française d'Hygiène, etc. Illustrated by heliotype and chromo-lithographic plates and two hundred engravings. New York: William Wood and Company. 1896.

The author's "Manual of Bacteriology," published several years ago, became an acknowledged authority in this science, and as a book of reference was invaluable to the student; but to the busy practitioner was too bulky, containing a lengthy description of non-pathogenic bacteria. In the "Text Book of Bacteriology" this and the bibliography contained in the larger work are omitted.

The author shows in his new work that he has kept abreast of the progress made in the science of bacteriology.

The first part deals with classification, morphology, and general bacteriological technology; the second, the general biological characters of bacteria; this part contains a full description of antiseptics and disinfectants, the action of gases and of the haloid elements upon bacteria, the action of acids and alkalies and of the various salts and coal-tar products, of blood serum and other organic liquids, and the practical directions for disinfection; the third section is devoted to the pathogenic bacteria, to their modes of action, channels of infection, susceptibility and immunity, etc.; the fourth part describes the saprophytes. The author's style is clear and concise, and the illustrations are beautifully executed.

J. L. H.

A Text-Book upon the Pathogenic Bacteria, for Students of Medicine and Physicians. By JOSEPH MCFARLAND, M. D., Demonstrator of Pathological Histology and Lecturer on Bacteriology in the Medical Department of the University of Pennsylvania. With one hundred and thirteen illustrations. 359 pp. Price, \$2.50. Philadelphia: W. B. Saunders. 1896.

This treatise aims to convey to the student a concise account of the technical procedures necessary in the study of bacteriology, a brief description of the life-history of the important pathogenic bacteria, and a sufficient

description of the lesions attending their invasions to give an idea of the origin of symptoms and the causes of death. Only pathogenic bacteria are embraced, except when necessary to distinguish them from species with which they may be confounded, in which case the latter are also described as fully as may be necessary. The author has drawn upon the best text-books both for description and illustration, rightly concluding that in this way something superior may be had to new work gotten up for the occasion. The reader has in this admission assurance that he is offered the best to be had, and also that it is honestly offered. D. T. S.

A Treatise on Surgery. By American Authors. For Students and Practitioners of Surgery and Medicine. Edited by ROSWELL PARK, A. M., M. D., Professor of the Principles and Practice of Surgery and of Clinical Surgery in the Medical Department of Buffalo Medical College, Buffalo, N. Y. Vol. I. General Surgery. With three hundred and fifty-six engravings and twenty-one full-page plates in colors and monochrome. In two volumes. Volume No. 1, containing 799 pp. Philadelphia and New York: Lea Brothers & Co.

The features claimed as new are a closely observed distinction between hyperemia and inflammation; chapters on the Surgical Pathology of the Blood, Auto-Intoxications, and the Surgical Sequelæ of Acute Non-Surgical Diseases. The importance of bacteriology is everywhere recognized, and its teachings are impressed on nearly every page. The two volumes are so arranged that each forms a complete treatise within itself, the first embracing such subjects as Surgical Pathology, the General Principles and Theory of Surgery, and the Surgery of the Tissues and the Tissue Systems; the second embracing the particular applications of general surgery to the Surgery of Regions and Organs.

The course pursued by the editor is that of so many recent co-operative works, viz., the selection of teachers in a large number of schools to treat the different subjects, more perhaps with a view of ready introduction to the alumni and the class-rooms of such schools than to the most efficient treatment of the several themes. It must be confessed, however, that a good selection of names appears in the list of contributors.

The work is well got up and of course well edited. The illustrations are executed in the clear and well-defined style characteristic of the Lea Brothers, though some of the plates, fine as they are, would be thought by many to be intended for display rather than elucidation. Though entering a field of strong competitors it will doubtless find many readers. D. T. S.

Transactions of the Southern Surgical and Gynecological Association. Vol. VIII. Eighth session. Held at Washington, D. C., November 12, 13, and 14, 1895. Published by the Association. 1896.

After commending the general excellence of the contributions to this volume, it would hardly be fair to specify any individual contributor unless justice could be done to all. The pleasantest feature the proceedings present to the consideration of humane people is the growing spirit of conservatism that characterizes many, or one may say, most of the articles.

One has often been startled, on reading reports of radical operations, at the claims of operators, when he well knew that the results reported had not been attained, but were claimed either in the blindness of overzealous enthusiasm or in the deliberate purpose of ultimate personal gain. In saying so much, however, it is not meant to say that there are no extravagances of operations recommended in some of these papers that will, if read twenty years from to-day, make the reader blush for the state of mind that would receive encouragingly such doctrine.

D. T. S.

The Student's Medical Dictionary. Including all the Words and Phrases Generally Used in Medicine, with their Proper Pronunciation and Definitions, based on Recent Medical Literature. By GEORGE M. GOULD, A. M., M. D., author of "An Illustrated Dictionary of Medicine, Biology and Allied Sciences," etc., with Elaborate Tables of the Micrococci, Leucomaines, Ptomaines, etc., of the Arteries, Ganglia, Muscles, and Nerves; of Weights and Measures, Analysis of the Waters of the Mineral Springs of the United States, etc. Tenth edition. Rewritten and Enlarged. 701 pp. Price, \$3.25. Philadelphia: Blakiston, Son & Co. 1896.

This volume, which is entirely new, is designed by the author to take the place of the New Medical Dictionary and the Student's Medical Dictionary, since these were adjudged not to represent satisfactorily recent progress in medical science. It is especially adapted to the wants of medical students. It is a work of convenient size and moderate price, while by the common verdict of the medical world it has already been placed in the very front rank of dictionaries of its class.

D. T. S.

A Compend of Diseases of Children, Especially Adapted for the Use of Medical Students. By MARCUS P. HATFIELD, A. M., M. D., Professor of Diseases of Children, N. W. U. Medical School, Chicago. Second edition, thoroughly revised. One colored plate. 220 pp. Price, 80 cents. Philadelphia: P. Blakiston, Son & Co. 1896.

Professor Hatfield has, in his little work, arranged under the various separate headings the whole subject of diseases of children up to date in a convenient form for ready reference as a "quiz compend." The book will serve a useful purpose, not only in the hands of medical students, but also in the hands of the busy practitioner.

R. B. G.

A Manual of Anatomy. By IRVING S. HAYNES, M. D., Adjunct Professor and Demonstrator of Anatomy in the Medical Department of the New York University, etc. With one hundred and thirty-four half-tone illustrations and forty-two diagrams. 680 pp. Price, \$2.50.

The author in this work has made a feature of recognizing the great practical importance of a thorough knowledge of the viscera and their relations to the surface of the body, by according to them the most prominent place in illustration and description.

The abbreviation of the work has been gained largely by restrictions in the treatment of the anatomy of the extremities.

The treatise affords one of the fullest of the manuals. It is not easy to see why the tabulation and grouping of the several parts, such as muscles

and arteries, which forms so important a feature of Gray's great work, should have been left out. There are many who think that the memorizing of the names of parts grouped in this way furnishes the strongest foundation for the remembering of the facts of anatomy. The illustrating and indeed the entire finish of the work is in a high degree attractive and presents a tempting invitation to what is so often regarded as a difficult study.

D. T. S.

Electricity in Electro-Therapeutics. By EDWIN J. HOUSTON, Ph. D., and A. E. KENNELLY, Sc. D. 301 pp. Price, \$1. New York: The W. J. Johnston Co. 1896.

It is enough to be told that this work is prepared under the auspices of the W. J. Johnston Company, and published by them, to be assured that it ranks with the very best in its line and class. The type is large and clear, the illustrations appropriate and full, and the style eminently lucid.

The work is the fourth of the Elementary Electro-Technical Series by the same authors.

D. T. S.

Foreign Correspondence.

LONDON LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

Lunacy in London ; Public Health ; Cycling for Women ; Working of the Inebriate Acts ; A Crematorium for Liverpool ; Death of Sir George M. Humphrey ; A New Bureau ; A Nurses' Cycling Club ; Smallpox at Gloucester ; The Bradshaw Lecture.

The statutory annual returns of the lunatics chargeable to the county of London and its various parishes and unions on January 1st, last, again show a considerable increase on the previous year, there being 19,334 as against 18,541, or an increase of 793. The Asylums Committee of the London County Council show that 12,853 lunatics were under certificate in asylums, in licensed houses, or in out-country asylums under reception contracts, as compared with 12,108 in 1895. The lunatics in work-houses were 307, or 48 more than the previous year. The patients in the Metropolitan Asylums Board imbecile asylums had also increased from 5,908 to 5,928, but the lunatics living with relatives and friends, and who are officially visited by the parochial medical officers, had decreased from 266 to 246.

The effect of the late abundant rains upon the public health has been remarkable. The Registrar's return last published is one of the best ever published. Only two or three towns report a mortality equal to 20 per 1,000; London is under 15, while Leicester is under 12; Croydon just over 9, and Derby well under 9.

The news of the death of Sir John Eric Erichsen, the well-known consulting and operating surgeon, was received with regret by a large circle.

Born in 1818, he entered University College, London, and in 1850 was appointed Professor of Surgery and of Clinical Surgery at that institution. He was at one time President of the Royal College of Surgeons of England, and of the Surgical Section of the Great International Medical Congress of 1881. Sir John was Surgeon Extraordinary to the Queen. He unsuccessfully contested the parliamentary representation of the Universities of Edinburgh and St. Andrews at the general election of 1885.

At the Sanitary Institute Congress Dr. E. B. Turner read a paper on "The Sanitary Aspect of Cycling for Ladies." He considered that there was almost a unanimous verdict, by those best qualified to judge, that the average standard of health among women who cycled had undergone an appreciable elevation. Dr. Turner had seen a large number of women and young girls from whom a vast number of petty and functional derangements had been entirely banished, thanks to the good offices of cycling, and some also in whom organic mischief had been alleviated. The cycle was a means of rapid locomotion adapted to the weak. The appetite was improved, sleep was encouraged, and there was a free and frequent renewal of the oxygen in the blood. With regard to clothing, as a medical man he considered "rational" dress safer and more healthful, though as a man he considered it excessively ungraceful.

The sixteenth report of the Inspector of Retreats under the Inebriates Acts has been issued. The Inspector says he has good reason to be satisfied with the general condition of all the retreats. The health of the patients has been good on the whole, and not a single death has occurred. In the aggregate 130 patients were admitted to the ten houses licensed. In 1894 the number of admissions was 133. He thinks emphatically that retreats are necessary and are doing much good, not only to the individuals and their families who actually come under their influence, but also to society at large, calling attention as they do to the terrible results of a too free and excessive use of alcohol. Special stress is laid upon the necessity for life-long abstention from alcohol for those who have once been its victims, and not only for them, but also on account of its hereditary, for their children. It is found that most of the failures result from the fact that patients will not be convinced that for them even a moderate use of stimulants when they return to their homes will prove not only dangerous but even fatal. On the question of admission it is regretted that statutory powers demand such a formidable barrier as signature before two justices, this having proved a great deterrent to many who would otherwise quite willingly have availed themselves of the provisions of the act. During the early months of the present year two new homes were added to the list of licensed retreats. One a large and convenient house standing in an estate of 1,250 acres, in a healthy and beautiful part of Herefordshire, was opened by Dr. Walker, J. P., for the reception of male patients.

The first crematorium in the vicinity of Liverpool has been opened by the Earl of Derby, who said that though he saw that no element was want-

ing to make the scheme a success, there was at the same time a deep-seated preference among the majority of Englishmen for the present system of burial in God's acre. There was nothing in cremation incompatible with the developments of a high civilization, and though the legal difficulties were not inconsiderable, the idea that cremation would render crime difficult of detection was for all practical purposes exploded.

On the very eve of the commencement of the October term Cambridge University loses one of its most brilliant sons by the death of Sir George Murray Humphrey. He took his M. D. at Cambridge in 1856, and became Professor of Anatomy in 1866, a member of the Council of the College of Surgeons in 1868, of the Court of Examiners 1877, represented the University of Cambridge as member of the General Medical Council from 1869 to 1889, and was Professor of Surgery at Addenbrook's Hospital. He was the first president of the Anatomical Society of the United Kingdom. The late professor was the author of "A Treatise on the Human Skeleton," "On Mythology," "Old Age and Changes Incidental to It." Some years ago when visiting Sudbury, his native town, he was entertained by the mayor and corporation of that ancient municipality, and in the course of a speech in reference to the presentation of his portrait, stated that his grandfather was an artist of considerable mark at Sudbury, who, as a conscientious Liberal, gave the corporation of his day considerable trouble, winning an action against them and selling off some of the corporation goods.

It has been determined not to hold the annual dinner of the old and present students of the medical faculty of University College, in consequence of the death of Sir John Erichsen.

It is suggested that a bureau should be established in London in which shall be collected information relating to the manners and customs, religious beliefs and laws of all primitive races inhabiting the British colonies or upon the borders of the empire. The idea is that settlers and travelers being in possession of such information would avoid misunderstandings with natives that were frequently such causes of disaster.

The nurses of Guy's Hospital are forming a cycling club. A club house has been taken and arrangements have been made by which they can obtain bicycles on easy terms. The medical staff of the hospital is unanimous in its encouragement of the undertaking.

Dr. Gowers, in his forthcoming Bradshaw lecture at the Royal College of Physicians, will pursue the line of investigation opened by his lecture at the Ophthalmological Congress some years ago, by taking up the subject of the Subjective Sensations of Sound.

Since at Gloucester, during the recent epidemic of smallpox, upward of two thousand persons were attacked, and of these a little more than twenty per cent died, the authorities have determined to enforce the vaccination act, which has up to the present time been a dead letter in that city. The mortality among the vaccinated was 9 per cent, while that among the unvaccinated was 45.5 per cent.

LONDON, September, 1896.

Abstracts and Selections.

MENINGITIS IN ENTERIC FEVER.—Kühan (*Berl. Klin. Woch.*, June 23, 1896,) observes that the disproportion between the cerebral symptoms in typhoid fever and the morbid lesions found in the nervous system have long attracted attention, and that these pseudo-meningeal symptoms are well known to experienced observers. Purulent meningitis has occasionally been seen in enteric fever. It has been put down as a mixed infection due to pyogenic micro-organisms, but it has been shown that the typhoid bacillus has pyogenic properties, and can produce this purulent meningitis. The author relates a severe case of enteric fever in a man, aged thirty-two, accompanied by hemorrhage and complicated by purulent meningitis. A bacteriological examination of the blood during life showed colonies of the typhoid bacillus. The cerebral symptoms did not appear until the thirty-second or thirty-third day of the disease. The patient rapidly became somnolent, the pulse irregular, and the urine and feces were passed unconsciously. The pupils were equal, but reacted sluggishly. There was slight retraction of the head, but no optic neuritis. Death occurred on the thirty-sixth day in profound coma. The typhoid ulcers were nearly all in process of healing. Numerous typhoid bacilli were still present in Peyer's patches. There were slight microscopic changes in the renal epithelium. After the removal of the dura mater the convolutions were seen to be covered with purulent exudation. The pus was intimately connected with the pia mater. The presence of the typhoid bacillus in the mesenteric glands, spleen, and exudation over the convexity, as well as at the base of the brain, was proved bacteriologically. Here the purulent meningitis was a metastasis of the typhoid bacillus. The bacillus had penetrated into the blood, as shown by the bacteriological examination made during life, and had settled down by predilection in the membranes of the brain.—*British Medical Journal*.

ITROL (SILVER CITRATE) IN THE TREATMENT OF GONORRHEA.—Dr. Oscar Werler, of Berlin, contributed to the *Berlin klinische Wochenschrift* an article on the use of this agent, introduced by Credé, in the treatment of gonorrhea, and he has been good enough to send us a reprint of his article. The salt is made in Heyden's chemical works, in Radebeul. Dr. Werler states that in the course of about six weeks, in private and public practice, he has used it at least in fifty cases of acute or chronic gonorrhea, in three of gonorrheal urethritis in women, in gonorrheal inflammation of the vulvo-vaginal gland, and in a few cases of chronic cystitis, with very favorable results. It is used as an injection in the ordinary way, also in irrigations according to Diday's method, and by a modification of Janet's procedure,

consisting in washing the entire urethra with a lukewarm solution of the silver salt by means of a large syringe. In acute gonorrhea he prescribes at the outset a very weak solution, one of 1 to 8,000, and generally increases the strength. The injections may be used four times a day. The solution should be kept in a yellow bottle. It is important that it should be resorted to without loss of time, before the gonococci have penetrated deep into the mucous membrane. Even in very weak solutions silver nitrate is an energetic antiseptic, disinfectant, and germicide. He sums up as follows: Itrol has an intense gonococcus-destroying action; it is readily borne by the urethral mucous membrane, and causes no noteworthy irritation or increase of the inflammation; its action is deep-reaching, but without injury to the mucous membrane; it therefore meets all the requirements of an efficient remedy for gonorrhea.—*New York Medical Journal*.

LUMBAR PUNCTURE.—At the recent French Congress of Internal Medicine (*Sem. Med.*, August 19th,) Denigés and Sabrazés presented a communication on the diagnostic value of lumbar puncture. In 14 cases the procedure gave negative results 6 times and positive 8 times. The latter included 6 of acute tuberculous meningitis, 1 of procursive epilepsy, and 1 of hydrophobia. The escape of the fluid is always intermittent; it is generally very rapid, but in exceptional cases it is very slow. The quantities obtained were respectively 1, 11, 14, 15, 32, 40, 100, and 102 c. cm. In a case of tuberculous meningitis, in which 40 c. cm. were removed shortly after the puncture, a rise of temperature of 1° C., an increase in the respirations, which were of the Cheyne-Stokes type, and a slight acceleration of the pulse were noted. The liquid, which is always turbid and sometimes sanguinolent in cases of meningitis, may in other conditions, for instance in hydrophobia, come through the cannula as clear as spring water. The fluid was always examined bacteriologically at once after centrifugalization. In three cases of meningitis Koch's bacilli were extremely abundant; red corpuscles, leucocytes, mononuclear, and polynuclear, and giant cells were also found. In one case no bacilli were found, and the result of inoculation was negative, although sections of the cerebral membranes showed tubercle bacilli. Subdural injection into the dog of cerebro-spinal fluid withdrawn by lumbar puncture during life in a case of human hydrophobia was followed by furious rabies two months later. The bulb of this animal inoculated in a rabbit by trephining induced paralytic rabies after fifteen days' incubation. Chemical analyses were made of the centrifugalized fluid in 5 cases of tuberculous meningitis and 1 of hydrophobia. In 3 cases of acute tuberculous meningitis the fluid contained a large amount of organic principles, from 2 g. 33 cg. to 2 g. 55 cg. per liter; no reducing bodies were found in 2 cases, and only traces in 1. In hydrophobia the density of the fluid is less than in tuberculous meningitis, only 20 cg. of serum per liter being found in the case examined. On the other hand, the reducing substances corresponded to 72 cg. of glucose per liter; the chlorides were more abun-

dant (6 g. 90 cg. instead of 5 g.), as were also the carbonates, phosphates, and sulphates. The authors suggest that by pursuing these researches it might be possible to show that to each microbic type of meningo-cerebro-spinal infection there corresponds a particular analytical formula of the cerebro-spinal fluid.—*British Medical Journal*.

TRUNK ANESTHESIA IN LOCOMOTOR ATAXIA.—Dr. Hugh T. Patrick, of Chicago, read a paper at the twenty-second annual meeting of the Mississippi Valley Medical Association, in which he said that in nearly all cases of tabes dorsalis there was a band of anesthesia about the trunk at the level of the nipple. Early in the disease it was very narrow or even incomplete, or might be represented by a zone in which the localization of touch is not normally accurate. The sensory blunting on the leg, so frequent in tabes, was generally an analgesia. The trunk anesthesia was essentially tactile and the pain sense might be quite normal. The band of anesthesia did not correspond to the cutaneous distribution of the intercostal nerves, but to nerve fibers arising from adjoining segments of the spinal cord. In some cases there were two distinct zones of anesthesia, indicating simultaneous involvement of spinal segments at some distance from each other. The borders were inconstant, ordinarily retracted on continued testing, and varied in position with the method of examination. The same band of anesthesia might occur in syphilitic pseudo-tabes. The principal characteristics of the symptoms were illustrated by numerous diagrams and photographs.

Dr. Hughes said it was not surprising that these peculiar areas of anesthesia should be found in locomotor ataxia, considering that the entire symptom-complex of the disease was due to disturbance of the sensory mechanism. Organic disease might give expression to a latent hysteria, causing a combination of the two diseases. In locomotor ataxia there might be either anesthesia and analgesia or hyperesthesia and hyperalgesia.

TREATMENT OF DIABETES.—At the recent French Congress of Internal Medicine (*Sem. Méd.*) Moussé, of Toulouse, said he had tried antipyrin with the object of diminishing the amount of sugar, uric acid, and urea, but the diminution had only been fleeting. He had come to the conclusion that antipyrin should not be prescribed for diabetes. Beer yeast was of no use in his hands. He has tried pancreas in the fresh state in daily doses of 30 g., but with no better success. In his opinion the corner-stone of treatment in diabetes is diet; if drugs are used, their effect should be closely watched, as they are not infrequently hurtful. In discussing the communication, Spillman said he had treated two cases of wasting diabetes with injections of pancreatic juice. Each time the injections were given the sugar diminished and the weight remained stationary. Moussé admitted that each time he had given pancreas it had seemed to him that loss of weight was retarded. *British Medical Journal*.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNĀ*"

Vol. 22.

SATURDAY, OCTOBER 31, 1896.

No. 9.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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JOHN P. MORTON & COMPANY, Louisville, Ky.

THE SEMI-CENTENNIAL OF ANESTHESIA.

The Jubilee Year of the discovery of that *Læthe* for pain, anesthesia, was celebrated with imposing ceremony at the Massachusetts General Hospital in Boston on the 16th instant.

The gathering was notable in the distinguished physicians and surgeons present, and in the addresses which were delivered. The protagonist of anesthesia is held to be Dr. W. T. G. Morton, who, fifty years ago, was the first to administer ether in public as a preliminary to a surgical operation; but "the gathering was no less in honor of Dr. John C. Warren, whose courage permitted the experiment which led to this event." The old operating-room under the dome of the hospital was fitted up to look as it did on that memorable day, and in this a reception was held for an hour, when the assemblage repaired to the Bigelow operating theater, where the public addresses were made.

Dr. J. Collins Warren, grandson of the great surgeon, presided, and Mr. Charles H. Dalton, president of the hospital, delivered the address of welcome. Next was given a brief account of the steps of the operation by Dr. Robert T. Davis, of Fall River, who, as a student, witnessed it. Then followed the big guns in medicine and surgery who were honored by the occasion and honored it with appropriate addresses.

*The terrors of surgery before anesthesia were set forth by Dr. John Ashhurst, jr., of Philadelphia, who, in a brief paper, recounted some of the

° New York Medical Journal.

sufferings and results to patients in operations done without anesthesia. He closed his paper by saying: "But yet—and yet—surgeons went on in every country cutting and burning, and patients went on writhing and screaming, until on the 16th day of October, in the year 1846, in the Massachusetts General Hospital, Dr. John C. Warren painlessly removed a tumor from a man who had previously been etherized by Dr. W. T. G. Morton—and surgical anesthesia became the priceless heritage of the civilized world." Dr. David W. Cheever, of Boston, told what anesthesia had done for surgery, and said: "Apart from the benefits to the patient, avoidance of mental as well as physical shock, it is a benefit to the surgeon, in that his moral fiber is less strained and judicial callousness is no longer called for; he need not steel his heart, for his victim does not feel." Dr. John P. Reynolds, of Boston, recounted the benefits of anesthesia to parturient woman. He said that in normal labor due anesthesia was free from every shadow of danger and that the alleged after-evils did not exist; on the contrary, the gain in safety even outweighed inexpressibly the comfort and relief. In a paper on *The Influence of Anesthesia upon Medical Science*, Dr. William H. Welch, of Baltimore, incidentally made a strong plea for vivisection of animals, the advantages of which in experimental medicine were incalculable, and said that, without criticising the original experiment with ether upon a human subject, he contended that it was unnecessary and not entirely conservative, since it could have been as well performed upon an animal. In a paper on *The Surgery of the Future*, Dr. Charles McBurney, of New York, said he thought that the future surgeon would enjoy a much closer and more intimate relation with his brother, the physician, than had ever existed between them before, for what belonged to medicine and could be cured by surgery only would be far better appreciated by both surgeon and physician than it was to-day; for the one would gladly make use of what the other was able to furnish. The last item on the very well arranged program was a poem on *The Birth and Death of Pain*, by Dr. S. Weir Mitchell, of Philadelphia, who, in the opening stanza, which is here reproduced, paid a feeling tribute to Dr. Oliver Wendell Holmes:

Forgive a moment, if a friend's regret
Delay the task your honoring kindness set.
I miss one face to all men ever dear;
I miss one voice that all men loved to hear.
How glad were I to sit with you apart,
Could the dead master use his higher art
To lift on wings of ever lightsome mirth
The burdened Muse above the dust of earth,
To stamp with jests the heavy ore of thought,
To give a day with proud remembrance fraught,
The vital pathos of that Holmes-spun art
Which knew so well to reach the common heart.
Alas! for me, for you, that fatal hour!
Gone is the master! Ah! not mine the power
To gild with jests that almost with a tear
The thronging memories that are with us here.

Among those present were Lord and Lady Playfair, of London. In a brief extemporaneous address which Lord Playfair was invited to make he gave full credit to the United States for the honor of the discovery of anesthesia. He said: "Although many may have experimented in this line, the man entitled to the right of discovery is the man who realized it to the world; the credit of this discovery is undoubtedly due to Dr. Morton in the first instance. Sir Humphrey Davy made some experiments in this line, but he never realized the importance of ether." There were also present the widow, son, daughter, and grandson of Dr. Morton, and many physicians of eminence from various parts of the country.

We once heard the beloved, lamented John A. Broadus say that he would be happy to see a good, old-fashioned Fourth of July celebration with guns, music and feasting and speeches, rehearsing the great deeds of Washington and his compatriots, with not a word about the French who came over the briny sea to help us, and without whose aid America would not be free to-day.

The gift of the priceless boon anesthesia to humanity was the result of numerous experiments by various investigators, and while honor may be fitly paid and should be given to the experimenter who first put it to practical test in a surgical operation, the participants in the Jubilee should not have forgotten the foreign helpers, nor have been totally unmindful of a certain humble Southerner who did some clever work in this line.

Notes and Queries.

TREATMENT OF HYPERTROPHIED PROSTATE.—Vautrin (*Archives d'Electricité Médicale*, June 15, 1896,) reviews the methods of dealing with enlargement of the prostate in its various stages. Early in the disease catheterization is valuable, but may be dangerous if not entirely aseptic, particularly when intrusted to the patient himself. In such cases electrical treatment is often of great service. Vautrin uses a gum-elastic sound with the end cut off; it is traversed by a copper thread terminating at one end in an olive-shaped bulb of the same metal; at the other in a ring to which the negative rheophor can be attached. The sound is introduced into the urethra, so that the bulb is in contact with the prostatic urethra. The result of electrolyzation is a marked diminution in the size of the gland, probably to the awakening of the dormant activity of its smooth muscle fibers. This view is confirmed by the fact that in old-standing cases in which sclerotic changes have taken place in the prostate electricity is unavailing. The author con-

siders that electrolysis should therefore be restricted to the early stages of hypertrophy, in which it is most valuable as determining a change in the intimate structure of the gland. Later on, when definite and permanent retention together with other changes has supervened, perineal drainage and suprapubic cystotomy are valuable remedies; it is here, also, that castration or section of the vasa deferentia are often efficacious and at the same time practically without danger. Prostatotomy and prostatectomy should, on the other hand, always be reserved for exceptional cases.—*British Medical Journal*.

LOCAL APPLICATIONS OF SALICYLATE OF METHYL IN RHEUMATISM.—At the recent meeting of the Congrès Français de Médecine at Nancy (*Méd. Mod.*) Lannois and Linnossier presented a communication on the treatment of rheumatism by local applications of salicylate of methyl, a method which they claim to have been the first to propose. Clinically they have used the method in different forms of rheumatism (acute, subacute, gonorrheal, etc.), and in various cases of peripheral pain (neuralgia, neuritis of tuberculous subjects, etc.). In all these cases salicylate of methyl had a well-marked effect on the pain, causing it to cease in a variable time and for a longer or shorter period according to the nature of the case, and bringing about a cure in a few days. The drug must be used in cases in which for any reason it is desired to obtain a local effect, and when the ordinary remedies for rheumatism are not well borne by the stomach. Salicylate of methyl acts well in acute articular rheumatism, but on account of the difficulty of applying it to painful joints it must be employed in such cases only if the internal administration of remedies has failed. On the other hand, in subacute and chronic forms, in the painful paroxysms which occur from time to time in the different varieties of deforming rheumatism, local absorption of salicylate of sodium acts as well as salicylates taken by the mouth, often better.—*Ibid.*

ERYSIPELAS TOXINES IN MALIGNANT DISEASE.—The committee (consisting of Drs. L. A. Simpson, A. G. Gerster, and B. F. Curtis) appointed by the New York Surgical Society to investigate the use of erysipelas toxins in cases of malignant disease have presented a report (*Annals of Surgery*) in which they state that both before and since their appointment as a committee they had been able to observe, individually and together, a considerable number of cases treated by such toxins, and in no case had they found any amelioration which held out a prospect of ultimate cure. They had, on the contrary, observed in some cases that the rate of growth of the disease was much more rapid during the treatment. They found that the treatment also imposed a very severe tax upon the strength of the patient, and apparently hastened the cachexia in some cases. They expressed the belief that in the instances of apparent cure or marked improvement the correctness of the diagnosis is open to doubt. They therefore submitted

the following conclusions: (1) That the danger to the patient from this treatment is great. (2) Moreover, that the alleged successes are so few and doubtful in character that the most that can be fairly alleged for the treatment by toxines is that it may offer a very slight chance of amelioration. (3) That valuable time has often been lost in operable cases by postponing operation for the sake of giving the method of treatment a trial. (4) Finally, and most important, that if the method is to be resorted to at all, it should be confined to absolutely inoperable cases.—*British Medical Journal*.

JOHN ERIC ERICHSEN, F. R. S., LL.D., Hon. M.Ch. and Hon. F. R. C. S., died at Folkstone, England, September 23d. He was born July 19, 1818, and educated at the Mansion House, Hammersmith, and at University College, London. At the time of his death Mr. Erichsen was Emeritus Professor of Surgery and Consulting Surgeon to University Hospital, and to many other medical charities. He had been President of the Royal College of Surgeons of England, of the Royal Medical and Chirurgical Society, and of the Surgical Section of the Great International Medical Congress of 1881. He was Surgeon-Extraordinary to the Queen, and had been President of University College, London, since 1887. Mr. Erichsen was the author of many works and essays on physiology and surgery.

THYROID THERAPY.—J. B. Herrick (*Medicine*, August, 1896), from a review of the observation of various clinicians throughout the world on the therapeutic effects of thyroid extract in various diseases, thinks himself justified in coming to the following conclusions concerning that remedial agent: (1) It is curative in myxedema (idiopathic, cretinism, operative). (2) Many cases of obesity are cured by it. (3) Simple hyperplastic struma, particularly if in the young, is frequently cured or improved. (4) In (1), (2), and (3) the remedy has to be continued for an indefinite time to prevent relapse. (5) It may prove of value in some cases of tetany. (6) In skin diseases it is of doubtful value, to say the least. (7) The same is true of mental and nervous diseases. (8) In exophthalmic goitre it is contra-indicated. (9) The results are practically the same whether fresh glands, extracts, or dried glands are employed. (10) This is probably true also of the thyro-iodine of Baumann.—*British Medical Journal*.

BACILLUS SMEGMATIS AND TUBERCLE BACILLUS.—Grethe (*Fortschr. der Med.*) points out the need for some simple method of differentiation of the smegma bacillus from that of tubercle. In one case a kidney was removed as tuberculous, supposed tubercle bacilli having been found in the urine; it was found after operation that there was only calculus pyelitis. Other similar errors have been recorded, and it is suggested that in such cases the mistake arose from confusion of the bacillus smegmatis and the bacillus tuberculosis. Inoculation of animals being seldom available for the diagnosis, various staining methods have been suggested. These have mostly proved unsatisfactory. Grethe has found, however, that reliable results are

obtained by staining with concentrated alcoholic methylene blue. This stains the bacillus smegmatis well, and if the preparation be first stained in the ordinary manner with carbol, fuchsin, tubercle bacillus, if present, is easily identified by its red color contrasting with the blue of the rest of the preparation, including the bacillus smegmatis.—*Ibid.*

LOCAL treatment of carcinoma is useless, although in cases of doubt, as when there is ulceration or fissure, I employ a favorite ointment having the following composition:

R	Balsam, peruviani,	} aa	3 j;
	Unguent. hydrargi nitratis,		
	Petrolati,		

And if healing does not take place in two weeks I operate at once. Carcinoma never heals in this way.—*J. H. Hearn, in International Jour. of Surg.*

NEW YORK POST-GRADUATE MEDICAL SCHOOL.—The fifteenth annual announcement of the New York Post-Graduate Medical School and Hospital has just been issued. Five hundred and forty-two physicians from all over this continent have attended the courses at the institution during the past year. More than one thousand operations were performed in the hospital, which is one of the largest in the city, containing special wards for babies and children, while nearly twenty thousand patients were treated in the out-door department.

I WOULD remind you of Sir James Paget's too often neglected statement, that we ought to examine patients for operation with fully as much care as we do for life insurance; and add to it, that if this examination be so conducted we shall often find that which will make us hesitate and prepare them, before subjecting them to enhanced risk of what may in other respects seem for their good.—*Roswell Park, in International Jour. of Surg.*

HABITUAL immunity from infection creates an operative confidence that may lead to a neglect to give full weight to such warnings or contra-indications as might be found in the probable severity of the operation or in the reduction of the patient's vitality, especially in malignant disease.—*Stimson, in International Journal of Surgery.*

DR. BURNEY YEO has been appointed by the Council of King's College Professor of the Principles and Practice of Medicine in succession to Dr. Lionel Beale, and Dr. John Curnow has been appointed to the chair of Clinical Medicine in succession to the late Sir George Johnson.—*Lancet.*

OWENSBORO, KY., and vicinity is suffering from an invasion of typhoid. There is hardly a farm-house along the banks of Mud River, for twenty miles, in which there is not at least one case. Berea, Ky., is also suffering from a typhoid epidemic.

SOME of the physicians in Paris, France, seems to be starving, according to all accounts.

Special Notices.

PREVALENT MALARIAL CONDITION.—When two such well-known drugs as antikamnia and quinine are offered to the profession it hardly seems necessary to indicate the especial class of affections which call for their use. Antikamnia may now unquestionably be called a perfect substitute for morphine for internal administration. It has complete control over pain, while it is free from the undesirable after-effects of the alkaloid of opium. But antikamnia not only possesses the good qualities of morphine without the bad, but it also has the properties peculiar to the coal-tar series. In cases of malarial fever the combination of antikamnia and quinine should be given as a prophylactic and cure. For all malarial conditions quinine is the best remedy we have. But associated with this condition there is always more or less pain, which often renders the life of the individual uncomfortable, if not positively miserable. Antikamnia will remove these unpleasant symptoms and place the system in the best condition for the quinine to do its work. There are a number of ailments, not closely defined, which are due to the presence of malarial poison. All such conditions are greatly benefited by the use of this combination. "Antikamnia and Quinine Tablets," each containing $2\frac{1}{2}$ gr. antikamnia, $2\frac{1}{2}$ gr. sulph. quinine, meet the indications most frequently. In headache (hemicrania), in the neuralgias occurring in anemic patients who have malarial cachexia, and in a large number of affections more or less dependent upon this cachectic condition, the regular administration of these tablets will produce the most happy results.

INFLAMMATORY DIARRHEA.—In the insidious beginning of the disorder, when large, pasty stools are being passed, the child, if an infant, should be fed with weak veal broth and barley water in equal proportions; whey with cream; the yolk of one egg beaten up with broth or whey, and Mellin's Food mixed with whey or barley water. The meals should be frequently varied during the day, and the quantity allowed must be strictly proportioned to the infant's powers of digestion. For medicine he may take the powder of rhubarb (gr. ij-ii) and aromatic chalk (gr. ii-j-v) every night for three nights; and in the day, a mixture composed of half a drop or a drop of laudanum with four or five grains of the bicarbonate of soda in some aromatic water. From "Disease in Children."

EUSTACE SMITH, M. D.

ENURESIS NOCTURNA.—Dr. A. B. Wilson, Buffalo, N. Y., writing, says: This was a case of a girl nineteen years of age suffering from irritable bladder, and who had wet the bed nightly from childhood. She was compelled to avoid company and the usual social life on account of frequent micturition. One bottle of Sanmetto overcame the irritation to such a degree that for the first time in fifteen years she passed a night without wetting the bed. She is still using the remedy in hopes of complete recovery.

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THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

VOL. XXII. LOUISVILLE, KY., NOVEMBER 14, 1896.

NO. 10.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

A STUDY IN APPENDICITIS.*

BY R. D. PRATT, M. D.

It has been my privilege to see fifteen cases of appendicitis in the past few years. These cases were individuals, the recurrent attack considered one. Of the fifteen, twelve recovered without operation; three died, one without operation, two after. Sex played the usual proportion, only four being females; age ran from eleven to sixty years, the largest number being between twenty and forty; recurrences occurred in four.

Case Eight: Woman, age fifty years, had had pain in right iliac region for twenty years, acute symptoms of appendicitis for several days; saw her with attending physician. After free use of salines she passed an enterolith as large as a guinea egg. Relief complete and persistent, three years having elapsed since the attack. In this case the concretion was evidently very slow in forming, and very favorably situated.

Case Nine: Young lady, age seventeen; had been sick several days under the charge of another physician. Shortly before our visit had had sharp pains in right side, considerable shock, and the passage in an hour or two afterward of eight ounces (estimated) of pus from the bowels; recovered in a few days; this being one of those fortunate cases in which spontaneous drainage takes place into the bowels.

Case Twelve: Man, age sixty, white, small farmer; had been sick for four days when I first saw him; typical symptoms of appendicitis with

*Read at the June meeting of the Kentucky State Medical Society, 1896. For discussion, see page 375.

acute nephritis. I was hurriedly summoned six hours after first visit, found him in collapse, with symptoms of developing peritonitis, owing to the kidney complication. (He was eliminating only three ounces of urine in twenty-four hours.) Operation was deemed inadvisable, and a very gloomy prognosis given. For the next four weeks he ran the ordinary course of peritonitis, finally recovering. Although eighteen months have elapsed he has had no further trouble.

The other cases that recovered presented all the cardinal points in the symptomatology of appendicitis, but ran the usual course, getting well after a few days' treatment.

Case Fourteen: Young, robust man, age twenty, had been sick one day under the care of another physician, only slightly ailing, with abdominal pains as if from colic, and a little fever in the evening. Saw him early the next morning; peritonitis had already developed to such an extent that operation would have done no good. He died next day, sixty hours from the onset of the disease. Autopsy revealed extensive septic peritonitis; pus everywhere; two small enteroliths in the appendix, suppuration, with a small perforation about large enough to pass a probe.

Case Fifteen: A young man, age twenty-three, had been sick fourteen hours when I first saw him; pronounced symptoms of appendicitis. As he did not improve under treatment in the next twelve hours, I advised operative interference, which was done that night, thirty hours from the beginning of the trouble. The abscess was easily opened, cleaned, and drained. He rallied well from the operation, but died two days later from intestinal paresis, possibly due to sepsis. The gauze drainage, removed immediately after death, was perfectly sweet. The cause in this case was three small enteroliths in the appendix. No autopsy was permitted.

Case Thirteen I have reserved for the last for the purpose of more fully entering into it, as in some of its features it is very unusual, and, as far as I can find from a close search of literature, unreported.

Mr. B., age thirty-four, traveling salesman. Saw him June 15, 1895, about 4 A. M. Complained the preceding day of colic, for which he had taken morphine, with relief until 2 A. M., then he had a hard chill. Had for several years been subject to frequent attacks of this same colic, occasionally requiring morphine, but usually obtained relief by drinking hot water and taking enemata. At my first visit he presented the usual symptoms of appendicitis, the point of greatest

tenderness, however, being one inch above the middle of Poupart's ligament instead of McBurney's point.

The second day of his sickness he had three chills, quite severe. I advised operation, but it was violently opposed by his family, and consent was finally absolutely refused. From that time until his death, on the eighteenth day, he had thirty-eight chills, he having had as many as seven in thirty hours, thirty-six hours being the longest interval between them. These chills were very severe, lasting from five to thirty-five minutes, and coming on without any premonition whatever. His temperature was very variable, being once, for a short while, 97° , most of the time normal, or 99.5° , except at the end of a chill, when it would run up as high as 103.5° to 107.5° ; a sponge bath or ice would reduce it in the course of an hour three to six degrees. Jaundice set in on the fourth day. After the third day, had I not seen him earlier, I would have thought there was no trouble in the appendix whatever. No pain, no tenderness, no swelling, no rigidity of the muscles for two weeks to point to the original trouble as persisting or being the cause of his illness; so that two of my friends, men of great experience, who saw him with me, believed that the trouble was not then in the appendix, but that it was possibly a developing abscess of the liver, or an obscure form of remitting fever. The profuse sweating of pyemia was absent.

To be perfectly candid, during these two weeks of time we were completely at sea, and, as consent was absolutely refused to even an exploratory incision, no means offered to make a positive diagnosis. On the seventeenth day he had sudden, sharp, severe pain in the right side, coming on immediately after a vomiting spell, rapid formation of a tumor, exquisite tenderness, and prostration, apparently a recurrence of the original trouble. Consent was then given to an operation, which was done twelve hours later. Incision brought away considerable pus and about an ounce of *blood clots*. He rallied very well from the operation, but died a few hours later from exhaustion. The autopsy revealed a large abscess, extending retroperitoneally from the iliac fossa to the liver, gangrenous appendix, the distal end sloughed off, congested sixteen inches of the lower portion of ileum, rupture in the posterior wall of the ileum one and a half inches from the ileo-cecal valve, one and a half inches in diameter, plugged with a large blood clot, drainage being from the bowels into the abscess instead of *vice versa*, there being probably one and a half ounces of blood clots and

some feces in the abscess; the ileum was clean, there were congestion and secondary pyemic abscesses in the liver; the other abdominal organs were healthy. The cause of this case proves to be gangrene of the appendix, resulting from a twist in that organ, occasioned by some unusual exercise, viz., horseback riding on a very rough-gaited horse.

It is almost an insult to a physician's intelligence to mention the question of the diagnosis of appendicitis. During the past six years there has been so much study of the diseases of the appendix by competent men in all parts of the world that very little more is left to be learned in regard to its symptomatology, etiology, or pathology. The vital question now is: How shall it be treated? Are all cases surgical? What form of treatment is best in the non-surgical cases?

I don't believe all cases are surgical. Some of our most distinguished surgeons claim that every case should be turned over to a competent surgeon as soon as recognized. This may be good practice for such centers of population as Chicago, New York, or Louisville, but hardly feasible in Shelbyville or Lebanon. In the cities where the benefits of learned counsel and the assistance of skilled surgeons can be had at a moment's notice, where there are various institutions equipped with all modern sanitary arrangements, and trained nurses, the question is simple compared with what it is to those of us practicing in the country, where probably our patient is four or five miles distant from our office, surroundings wholly unfavorable, nursing only what can be given by farm hands, or the woman of the house, whose time is divided between the sick-room and the kitchen. I hold that while in cases of dire extremity, where an hour's time may mean life or death, every physician should have the courage to take even the most desperate chances to save life; yet, when time will permit, no one should go into the abdominal cavity who has not had special training.

Look at the statistics of appendicitis. Three years ago Dr. William White, in a lecture at Philadelphia, made the statement that about eighty per cent of cases of appendicitis get well without operation. In a recent article in the Medical Record Dr. Wyeth made a statement that probably fifteen per cent might recover under conservative management. Here we have it: two men of equal prominence give almost diametrically opposite results from statistics. While my few cases bear out Dr. White's proportion, still they are so few as to count for almost nothing. I don't believe in taking an ultra-radical view, nor on the other hand in ultra conservatism, as Dr. McCartney, who, with

twenty-four consecutive recoveries under opium, thinks extremely few cases are surgical. This apparent inconsistency may be explained by the fact that surgeons see only the very worst class of cases, and rarely those mild ones that go on to recovery without operative interference. To a conscientious practitioner, whether to operate or not to operate is a most perplexing question, and one fraught with the greatest gravity and responsibility.

Here are two cases: One, an old woman, who after suffering for twenty years is relieved by a timely dose of salts. The other a robust young man, the picture of health, succumbs in sixty hours. Again, an old man with the most dangerous complications gets well after a month's sickness; a young man, under the best conditions for surgical aid, dies in four days.

Third, a young lady who properly was an operative case is relieved by spontaneous rupture and drainage through the bowels. On the other hand a young man, with also an abscess, after a tremendous struggle for three weeks, dies because the knife was not used early enough. Each case is a law unto itself, and only after a close study of its minutiae can we arrive at the conclusion as to what is best to be done in that particular case. As a rule, I think these are surgical cases: First, that class in which there is a rapid destruction of the appendix, and a quickly developing septic or purulent peritonitis, the fulminating cases of certain writers. These cases are the most treacherous, as the initial symptoms may be very trivial.

Second, those with moderately severe onset, in which the symptoms do not yield in a few hours to treatment, or are gradually getting worse, indicating a developing peritonitis or sepsis.

Third, in cases with initial symptoms which rapidly disappear, if there persists a condition simulating a pyemia or septicemia.

Fourth, in the recurrent cases, where the attacks are getting more and more frequent, so as to make life miserable, or so severe as to put the patient's life in jeopardy.

As regards surgery, or surgical technique, it is neither my province nor desire to speak. In the treatment of non-surgical cases we have very few medicines to select from. Absolute rest in the bed, starvation diet, ice or heat locally, as best can be borne, opium and salines form our list.

As to the relative value of opium and salines treatment, as a rule only sufficient opium should be given to make the pain bearable. The

cases in which Alonzo Clark doses of opium are indicated are few and far between. Besides masking the symptoms, and often thereby missing the most favorable time for operative interference, it locks up all secretions, deranges the stomach, and, stopping peristalsis, prevents all hope of drainage through the natural channel. The salines, on the contrary, by washing out the intestinal track, renders it in as nearly an aseptic condition as we can possibly hope to obtain. If the valve of Gerlach should still be patulous, it by a *vis a fronte* favors drainage into the colon. In addition, by depleting the portal circulation, it tends to prevent development of peritonitis.

There is one point on which we have to be guarded, however, in the use of salines, since, if suppuration has already taken place, the increased peristalsis may cause a rupture of the abscess into the abdominal cavity. My plan has been a combined one, barely enough opium to make the pain endurable, and salines in sufficient doses to thoroughly empty the bowels and keep up a mild diarrhea.

I have attempted nothing new or startling in this paper, but as truth can only be arrived at by a faithful report of our cases—failures as well as successes—this is my apology for presenting a somewhat trite subject for discussion.

SHELBYVILLE, KY.

SURGICAL ASPECT AND TREATMENT OF PLEURAL INFLAMMATION.*

BY R. C. FALCONER, A. M., M. D.

CASE I. Charles H., colored, aged nineteen, came to St. Joseph's Hospital, May 1, 1892, suffering from chronic empyema secondary to pneumonia. He was very much emaciated, having night-sweats; cough severe, at times violent, and attended with profuse purulent expectoration; dyspnea extreme; diffuse pain in right pectoral region. Temperature ranged from 101° to 104°; pulse 120. Absolute dullness anteriorly and posteriorly from base of lung to about third rib, "cracked-pot sound" very distinct. The pleurital abscess had ruptured spontaneously in the axillary line at the seventh intercostal space, and was discharging, through a small opening, fetid pus and tissue debris; seventh rib at aperture diseased.

* Read at the June meeting of the Kentucky State Medical Society, 1896.

Treatment. Under antiseptic surroundings the outlet was enlarged to the extent of two inches, an inch of diseased rib removed, cavity irrigated with saturated solution of boric acid and doubled drainage-tube inserted. Drainage and lavage continued four weeks. Recovery resulted.

CASE 2. On December 30, 1894, I was called to see William H., white, aged ten; duration of illness two or three days. Most prominent symptoms were general myalgic pains, cough, slight faucial irritation, and a moderate degree of pyrexia. The tenth day he complained of pain in left pectoral region anteriorly; cough had become more severe and paroxysmal; percussion notes—dull friction sounds faintly heard; dyspnea well marked; chest bulging. December 11th my associate, Dr. H. M. Skillman, saw the case with me, and by means of a Dieulafoy aspirator we withdrew a liter of thin pus. December 13th pleurotomy was performed in the axillary line at the sixth intercostal space, cavity irrigated with boric acid solution, and drainage-tube inserted. Recovery took place in four weeks.

CASE 3. Robert L., colored, aged twenty-eight, entered St. Joseph's Hospital, March 1, 1896, with well-developed right lobar pneumonitis. Two weeks later the character of cough, dyspnea, pain, and absolute circumscribed dullness (no bulging) led me to aspirate, which I did with a Dieulafoy instrument and found purulent effusion. Pleurotomy was done in the seventh intercostal space midway between nipple and axillary line; abscess cavity, which was small and seemed to be walled off from general pleural cavity, irrigated with two per cent carbolic solution. Patient recovered in two weeks.

CASE 4. On February 2, 1896, I was called to see Mrs. D., white, aged twenty-six, who had been seized the day before with chill and violent pain in right thorax. February 6th, friction sounds distinctly heard at scapular angle. February 16th, thoracentesis performed in the sixth intercostal space and three liters of serum withdrawn. Only one aspiration was necessary, and recovery promptly followed.

CASE 5. Mrs. S., white, aged thirty-two years; duration of illness two weeks. Diagnosis, made through hypodermic syringe, serous pleuritic effusion. Her physician, Dr. P. H. Molloy, was not notified until this condition had developed. She gave a history of primary pleuritis; right pleura involved. Thoracentesis performed in axillary line at seventh intercostal space, one aspiration sufficing. Recovery uneventful.

CASE 6. Sylvester H., white, aged ten, with history of primary pleuritis, presented all the phenomena of pleuritic effusion, serous character of which was determined through hypodermic syringe, and was limited to a small space in right thorax, so circumscribed in fact that thoracentesis was deemed inadvisable, and patient was left to nature and recovered.

CASE 7. Miss M., white, aged sixteen. Diagnosis, empyema (right thorax) consequent upon acute lobar pneumonitis, character of effusion decided by aspiration with a Dieulafoy instrument. Under partial anesthesia (chloroform) pleurotomy was performed in axillary line at the seventh intercostal space, cavity flushed with boric acid solution, and doubled drainage-tube inserted. Six days later I had to make a counter-opening in posterior thoracic wall to give vent to pus that had become liberated from the cavity posteriorly; drainage and lavage continued four weeks, and recovery resulted.

Deductions. It is not always an easy matter to determine whether dullness or absence of normal sounds signify consolidation of lung or an accumulation of fluid. We have to consider the history, progress, and incidents of the case, together with the physical signs. Bulging of the intercostal spaces is characteristic of pleural effusion, especially if it be large, and happens much less frequently in consolidation of lung; in fact in the latter condition the intercostal spaces are oftener retracted and depressed from inflammatory adhesions. The hypodermic syringe will frequently settle the question. Change of posture is another aid to diagnosis, also position of heart.

When to Operate. As soon as the presence of fluid is detected, unless it be a very circumscribed collection of serum, removal of all or part I think is advisable. In the event of even a limited or small quantity of pus the same rule as regards removal thereof, it seems to me, applies here. General pleuritic effusion, serous in character, whether primary or secondary, in the vast majority of cases if not withdrawn becomes purulent. The transition is frequently very quick and occasionally unnoticed; and a serous effusion is usually more easily managed than a collection of pus. There is a form of pleuritic effusion which deserves special attention, and that is the tubercular variety. Bloody serum is always strongly suggestive, and particular

borne in mind when withdrawing fluid, which ought to be done slowly and carefully, and if necessary part of the fluid reserved for a subsequent aspiration.

Pleurotomy. All antiseptic precautions must be observed. The incision ought to be quite two inches long, and at the best place for drainage. The axillary line, or a little posterior to it, at the sixth or seventh intercostal space, affords a good place for drainage. A counter-opening is at times necessary, especially in sacculated effusion, which occasionally happens. The rubber drainage-tube is indispensable, and is best doubled or two tubes inserted, care being taken not to push it in too far, or let it project too far on the outside. It is best secured in place by stitches of silk. Oakum is an excellent material for dressing, and with it an abundance of gauze and absorbent cotton is necessary.

Costotomy. I do not think rib exsection, as in Estlander's operation, is uniformly applicable, being in my judgment indicated only in chronic cases of empyema, where one or more ribs are diseased, and where it is necessary to have a larger opening to drain away thick pus and fragments of broken-down tissue. Of course costotomy is needed in some recent cases, but I think we ought to be guided by each case. An important precaution in costotomy is to smooth off any sharp edges that remain after dividing the rib. Curettement of the pleural cavity, if such a procedure be necessary, must certainly be done very cautiously.

Lavage. As to the question of intrapleural irrigation we had better look to the condition and indications of each case rather than observe a rule which might not be applicable to all cases and possibly detrimental to some. It is well in case of recent empyema to irrigate the cavity after operation with sterilized or medicated water, and occasionally, often if required, during the progress of the case. If the drainage is free, irrigation will have to be practiced less frequently than otherwise. Cases of chronic empyema, the pus being fetid and the debris gangrenous, demand frequent irrigations with an antiseptic solution carbolic acid, 1½ to 2 per cent. Hydrarg. bichlorid. 1-5,000 or a saturated solution of boric acid are useful. Carbolic acid, however, is contra-indicated in cases which bleed or show a hemorrhagic tendency.

affected side being most favorable to the outflow of discharge, ought to be encouraged, alternating with other positions necessary to comfort and relief of strain. Resulting deformity can be corrected or modified by gymnastic exercise and mechanical appliances.

LEXINGTON, KY.

THE TREATMENT OF GRANULAR LIDS.*

BY T. C. EVANS, M. D.

Lecturer on Ophthalmology and Laryngology, etc., Kentucky School of Medicine, Louisville, Ky.

In looking over the literature of trachoma, or granular lids, we find that in the treatment of this affection many and divers remedies, both medical and operative, have from time to time been introduced, lauded, decried, and abandoned, a simple catalogue of which would of itself make a long paper.

For convenience the subject will be divided into:

First, the treatment of trachoma proper, embracing the medical and surgical treatment of the essential lesion of the disease, the true granulation or sago-like bodies of the conjunctiva, together with the associated hypertrophy of the papilla and the general thickening of the conjunctiva.

Second, into the treatment of the complications of trachoma, embracing the various forms of ulcerative keratitis, photophobia, pannus, and eczema of the lids.

Third, the treatment of the sequelæ of trachoma, embracing irregularities, opacities, and staphyloma of cornea, xerosis and cicatrices of the conjunctiva, deformities of the tarsus, ptosis, entropion, trichiasis, and distichiasis of the lids.

In this paper I wish to speak only of the treatment of the trachoma proper, leaving for future consideration its complications and sequelæ, and to mention only such remedies as are more or less in general use at the present time, together with the surgical procedures that seem to offer the most satisfactory results in the management of this tedious and troublesome disease.

The medical treatment consists in the local application of eschar-

mercury, tannin, bichloride of mercury, and boric acid. The oldest and the almost universal remedy for all stages of the disease is blue stone or sulphate of copper. It has stubbornly held its own from time immemorial against all comers, and is to-day undoubtedly the best routine treatment for chronic granulations. Its method of application is a matter of the utmost importance; the thoroughness and duration and frequency of its application will determine not only its palliative or curative effects, but the amount of pain and reaction that will follow its use. The usual method is to rub a smooth crystal over the diseased conjunctiva. For convenience I use a crayon made from a large crystal and cemented in a wooden bundle with a screw cap to keep the crayon clean when not in use.

In applying it the operator stands behind the patient who is seated in an ordinary chair; the lids are everted and cleansed, the crayon is then rubbed well over the exposed conjunctival surface. In order to make a thorough application to the superior fornix it will be necessary to tilt the everted lid forward and pass the point of the crayon under the lid into the cul-de-sac. To alleviate as far as possible the pain attending its application it is well to begin the instillation of cocaine a few minutes before and again after the application of the blue stone. The frequency with which this will have to be repeated will depend on the indications, usually from two to four times a week will be sufficient. It is better applied in the morning unless the patient's business interferes. The tolerance of the patient will determine the length of time the crayon may be kept in contact with the conjunctiva.

In acute trachoma and in exacerbations of the chronic form accompanied by a profuse discharge, nitrate of silver in the strength of ten grains to the ounce will be of great service, but should not be continued for a long period of time on account of the discoloration of the conjunctiva that will follow.

In addition to the application of escharotics and astringents by the physician, the patient should be given a wash of boric acid or weak bichloride with instructions to thoroughly cleanse the conjunctival sac three or four times a day.

The time necessary to effect a cure, even with the best of care and complete control of the patient, is much longer than is generally supposed. It is rare to find a case getting well under one year, and not at all uncommon to find them lasting two or three years. In regard to the action of escharotics on the trachomatous conjunctiva, Stephenson

says: "Besides being caustic and astringent, those commonly used have for the most part antiseptic properties, their efficiency in trachoma probably depends on three factors. In the first place they destroy the surface microbe by their direct action, and after absorption no doubt act upon the micro-organism of the deeper tissues. Another point is, that they excite an abundant flow of serum, which in all likelihood has a double action. (a) Mechanical, by washing away the micro-organisms, and (b), a chemical, by virtue of the antiseptic properties possessed by blood serum. Lastly, phagocytosis may be concerned in the matter; it is conceivable that the destruction of the active germs of the disease may be carried out by the leucocytes which have left the vessels in response to irritation set up by the escharotic."

Of the many surgical procedures that have been devised and exploited for the relief of trachoma only two are now in any thing like general use. They are the operation of excision of the cul-de-sac and the operation of expression or squeezing. Excision of the cul-de-sac was advocated by Galezonski in 1874, later it was extensively practiced in Europe, more especially on the Continent, but for some reason the operation has never been popular in this country. Stephenson in his recent work on Epidemic Ophthalmia makes an enthusiastic plea for the operation, stating the objections so often urged, that excision of the fornix would be followed by entropion, ptosis, and symblepharon with limited movements of the ball, are purely theoretical and have no foundation in fact.

Before describing his method of operation he says: "My results show that excision of the fornix, if properly carried out, is invariably followed by good results. As regards my own practice it is no exaggeration to say that in every instance the removal of the diseased folds has materially hastened the cure of the granular lids." The advocates of this operation claim that the time of treatment is considerably shortened, that corneal complication clears up rapidly, that protection is afforded against relapses, and that the disease in other parts of the conjunctiva is favorably influenced by the removal of the superior retro-tarsal folds, that the operation is easy of performance, free from danger, and satisfactory in its results.

The treatment of trachoma by expression or squeezing out the granulation was first advocated by Mandelstam in 1883, but did not come into general use until several years later. The expression of the follicles was accomplished by the thumb nails or different kinds of forceps according to the fancy of the operator. The instrument that seems

to more nearly fill all the indications, and the one commonly used in this country, is what is known as the Knapp roller forceps. In exceptional cases the operation may be done under cocaine anesthesia, but as a rule general anesthesia is preferable and enables the surgeon to make a more thorough operation. Before beginning the operation the conjunctival sac is cleansed with a tepid bichloride solution. The lids are then everted and the retrotarsal folds as well as the palpebral conjunctiva is carefully and systematically gone over with the rollers, rupturing the follicles by pressure and extruding their contents. With proper care even the deep-seated granulations may be forced out without tearing the mucous membrane. But should a laceration of the conjunctiva occur it is a matter of no great moment. In order to protect his own eyes the surgeon should wear glasses during the operation, as the extruded material is sometimes thrown out with considerable force, and serious consequences might follow its introduction into the eye of the operator.

In exceptional cases a preliminary cantholysis may be necessary. A few years ago this operation was in common use, but, owing to the disfigurement that so often follows, it is now advised only in extreme cases.

The after-treatment should consist of ice-cloths with proper antiseptic precautions for the first forty-eight hours. The conjunctiva is surprisingly tolerant, and it is unusual to find much pain or reaction following the operation.

On the third or fourth day the routine treatment by escharotics and astringents may be resumed. In many cases a second operation will have to be performed. While the squeezing is the most rational and satisfactory of all surgical procedures in the treatment of trachoma, materially shortening the duration of the disease, lessening the complications and preventing the dangerous and troublesome sequelæ, still in only a few cases will it be sufficient to effect a cure unless assisted by local applications.

The ideal treatment would seem to be a combination of the surgical and medicinal. The patient should be impressed with the fact that the operation will not be the end of his trouble, but that it will be necessary to diligently and patiently carry out the local treatment for weeks or months. He should be made to understand in the very beginning that trachoma is at best a dangerous disease; that, whatever the method of treatment, its course will be long and tedious, and that any neglect to faithfully and patiently carry out the physician's instructions will not

only prolong the course of the disease, but will lead to the development of complications that may impair or destroy the eye or be followed by painful and disfiguring sequelæ that no amount of treatment or skill can correct.

LOUISVILLE.

Reports of Societies.

KENTUCKY STATE MEDICAL SOCIETY.

Stated Meeting, June 10, 11, 12, 1896, John C. Lewis, M. D., President, in the chair.

[CONTINUED FROM PAGE 345.]

Dr. R. D. Pratt, of Shelbyville, read a paper entitled, A Study in Appendicitis. [See page 361.]

This was followed by a paper on Appendicitis with Purulent Peritonitis, by Dr. J. G. Carpenter, of Stanford. The author dealt with the pathology and surgical treatment of the disease, and reported several successful cases which were treated by general practitioners who had not at command a fully equipped operating-room with all the paraphernalia of antiseptic surgery. The author laid proper stress upon the importance of early diagnosis and prompt surgical interference. All dallying and time-serving, the use of poultices and the administration of opium receiving his unqualified condemnation.

"Recurrent appendicitis is a constant indication for section and appendisectomy; suppurative or ulcerative appendicitis with or without perforation into abdominal cavity, or the appendix inclosed in thick lymph walls and adhesions, is a most cogent reason for operation. For imprudence in eating, exercise, or a blow, or fall, or carrying a heavy weight, straining at stool, a sneeze, colic, paroxysm of laughter, cough, or emesis, is liable at any time to strain, stretch, or rupture the abscess wall; or the latter, from septic pus laden with micro-organisms, become macerated, disintegrated, perforated, leak, rekindle the peritonitis, produce bands of lymph or an adherent appendicitis, and constrict the lumen of the bowel and cause internal obstruction or purulent peritonitis, and death—for death in a few hours or days will come unless early diagnosis, section, irrigation, and drainage are done as life-saving measures."

Inflammation may extend from the cecum into the appendix, or "the appendix may be primarily the *fons et origo* of irritation, inflammation," etc.

Differential diagnosis between disease of the appendix and disease of the cecum offers great difficulty at best, and is frequently impossible. "Perforation of the appendix is common, of the cecum rare;" but the question can be settled positively only by section. "The diagnosis must be made between appendicitis or cecal inflammation and acute intestinal obstruction, volvulus, intussusception, fecal impaction (obstruction may be simulated by the attending peritonitis, owing to the paralyzing effect on the bowel), from spinal or perinephritic abscess." "Abscess of ovary and tube, abnormal pouch, or diverticulum of ileum, is sometimes found in the right iliac region, or non-malignant and malignant tumors. Strangulation of the bowels, intussusception, volvulus, as a rule come on suddenly; impaction of feces, psoas or iliac abscesses or tumors come on gradually; their physical character and clinical history are usually sufficient to form a diagnosis. Abscess of the tube or ovary and impaction, by the history, digital and conjoined manipulation, may be diagnosed. The final diagnosis must be made when section is done."

The various complications of appendicitis, and the almost numberless adhesions which the inflamed organ may contract were given in detail. The steps of the operation were described with great thoroughness, and Dr. Nicholas Senn's conclusions were given in eight paragraphs.

The author reported seven successful cases which bear abundant testimony to the soundness of his doctrines, his diagnostic acumen, the perfection of his technique, and his great operative skill. He closes with some timely comments upon the present state of abdominal surgery.

DISCUSSION ON THE PAPERS OF DRS. CARPENTER AND PRATT.

DR. J. N. BAUGHMAN, Flat Lick: I regret that I arrived a little too late to hear Dr. Carpenter's paper on this subject, but I want to speak in behalf of "scrub" doctors. I have noticed that in nearly all of the papers read before this and other societies that physicians tell us just how to do the operation in appendicitis, whereas the after-treatment is entirely left out. In cases of appendicitis, just as soon as we cut down we find there are inflammatory adhesions. We break these up, and if they were let alone in a great many cases the wound would unite. One

of the nicest preparations to prevent readhesions is aristol or iodoform. Iodoform is used a great deal, but aristol has an advantage over it in that its odor is not so bad. It has no poisonous effects, and when applied to inflamed tissue it forms with the lymph a thin film which acts as an impenetrable barrier between the white leucocytes on the healthy side, so that the few wandering bacteria by aseptic preparations are left on the other side in an almost hopeless condition. They have no chance to get through. Aristol is perfectly innocent in its action. It will remain for an unlimited time and prevent readhesions. This is one thing that we should consider. We should aim to do work that will reflect credit upon ourselves, as well as save the patient.

Drainage is an important thing. I remember having a case to look after some time since in which I used a drainage-tube, but I do not think I shall do so again, for I think that pure aseptic gauze makes the best drainage we can have. Within twenty-four hours after the operation we can dispense with the drainage-tube, provided we have an ample supply of aseptic gauze on the outside to absorb all the products from this drainage-tube.

Another point struck me forcibly, and I do not know but that it is a new idea. In Halstead's operation for hernia a number of mattress wire sutures are introduced. Sometimes after operating upon a case of appendicitis we get hernia as a result in spite of all the precautions we take. Would it not be a good idea in some cases, where we have fear of getting hernia, to put in a lot of aseptic wire so that the abdominal contents could not possibly get through. I do not know whether this would work. I think it would. It does in hernia operations, and why would it not in cases where we perform laparotomy?

DR. A. M. CARTLEDGE, Louisville: There are one or two lessons to be taught from the report of the cases to which we have just listened. We have had reported a case in which a patient had subsequent pyemia, metastatic abscess of the liver and rupture into the ileum an inch and a half above the ileo-cecal valve. The next lesson we have to learn is that ninety per cent of the cases of suppuration rupture into the intestine. A patient who has had an abscess rupture into the intestine is not well, and such patients creep about for years and years. Many cases of supposed recurrent attacks of appendicitis are simply recurrent abscesses filling up and periodically discharging into the intestine. It is an extra-appendicular abscess. I think that is the main lesson the papers teach, and it is a very important one.

DR. H. H. GRANT, Louisville: It seems to me that these papers teach a little more than what has been mentioned by Dr. Cartledge. The profession perhaps do not think enough about the pathological condition which exists in appendicitis. There is a foreign body in all cases of diseased appendix, and not only that, it has become now foreign material, inflamed, suppurating, and oftentimes gangrenous. This condition exists in a large proportion of cases of appendicitis which are severe enough to be attacked surgically. In a large proportion of cases the appendix is found either perforated or gangrenous. If it were possible for the X-rays to show us the condition present in these cases of appendicitis which are supposed to get along well, in 95 per cent perhaps out of 100 we would see a condition which would encourage us to operate even if the patient is doing well. If we bear in mind what is illustrated by the last paper, that nearly all of the cases terminate fatally, while a few recover in spite of neglect, it would encourage us to demand early operative interference. The important point for us to remember is that the appendix is a diseased, infectious foreign body accomplishing no possible good, and that its removal can be safely and easily effected under favorable conditions, and for this reason early operation should be instituted where the indications are sufficient to warrant us to believe it to be a surgical condition. Little harm can come if an operation is done too early, or if it is done even where it was not necessary. In a large proportion of cases fatal results follow the neglect of the golden opportunity. This has been impressed upon me by the observation of a recent case. If we bear in mind the fact that we have in these cases infectious material to deal with, and if we could picture in our minds the condition underneath the skin, we would be encouraged to operate in many instances where we perhaps postpone it from day to day until the time for satisfactory operative interference has passed.

DR. ARCH DIXON, Henderson: I did not hear these papers on appendicitis, but I believe it is an infectious disease from its incipiency, and it is the duty of the surgeon or physician, as soon as he makes a diagnosis, to call in a surgeon and operate. I recall three fatal cases simply because the attending physician temporized about the matter, thinking perhaps the cases would get better. If they had been operated on promptly when the diagnosis was made they would have gotten well. I have been surprised to read some recent remarks by Dr. Hunter McGuire, of Richmond, in which he advised waiting to see what the patient is going to do. My experience teaches me that the very moment that

a diagnosis of appendicitis is made we should operate. I believe it is the proper thing to do.

DR. J. G. CARPENTER, Stanford: Pus in the abdomen or peritoneal cavity demands prompt surgery. That many patients recover from appendicitis without operation is a fact. I have had seven patients in my practice to recover without operation, and seven cases with suppurative appendicitis recover with operation. Two of my cases died from want of operation, as was proven by *post-mortem* examination. They could have been saved by prompt surgery. Four other cases were complicated with pus tubes, ovarian abscess, ovarian cystoma, and fibroids, and they recovered. I saw these last cases in the practice of Dr. Price, of Philadelphia. Prompt surgery was resorted to, pus tubes and appendix were removed, and all made prompt recoveries. But where complications exist, where the patient is dangerously sick, I believe it is better to do conservative surgery. Open the abdomen, irrigate and drain, for if we go hunting around for the appendix and breaking up adhesions we will infect the remaining portion of the peritoneal cavity and lose the life of the patient. So it is a grand thing to know when to stop, not to do meddlesome surgery, and I believe most of our fatality occurs in these suppurative cases where meddlesome surgery has been done, the surgeon not knowing when to stop.

As to who shall operate in these cases. There is no reason why the general practitioner should not operate himself. There is no reason why he should not be posted in the pathology after he has served an apprenticeship in abdominal and pelvic surgery. It is safer for him to operate for appendicitis than to send a hundred miles for a surgeon, for in doing this the patient may die before the surgeon gets there. It seems to me all folly for the general practitioner not to be able to operate on these cases. He should operate, and if he does not do so he is derelict in his duty.

As to the after-treatment, the general practitioner who is up to date is a safe man. No better man or physician can be found to administer the after-treatment. If he is the physician that he ought to be, the patient will fare as well at his hands as in those of the surgeon.

As to drainage, we will find cases where it is best to use a drainage-tube, and in other instances we may use gauze..

DR. R. D. PRATT, Shelbyville: I must differ with my friend, Dr. Carpenter. I do not think that there are many general practitioners scattered throughout the country who are expert as abdominal surgeons.

I think there are few abdominal surgeons among general practitioners, and it seems to me that when we get these cases that require operation they should be relegated to the specialist. We have a number of eminent abdominal surgeons who can do this work well, and therefore I would take the opposite view, that it is almost criminal for a general practitioner, when it is easy to get an abdominal surgeon, to go into the abdominal cavity.

I do not agree with Dr. Dixon that all cases of appendicitis are surgical. In the twelve cases that recovered and that were reported by me, I will acknowledge that two of them were probably surgical, but that they got well in spite of medical treatment. One of them, a young woman, who had an abscess which ruptured into the bowel, had perfect drainage take place, and, as far as I can learn, she has had no recurrence. This was three or four years ago. I think at least one half of the cases of the milder type will recover without operative interference, provided there is not too much medicine given. This leads to the one point that I particularly desire to emphasize, and that is the use of opium. I do not believe opium should be given except for the excruciating pain that some of these patients have, and then only in sufficient doses to make the pain bearable.

[TO BE CONTINUED.]

PAPILLOMA OF OVARY: IS IT MALIGNANT?—Dirner (*Centralbl. f. Gynäk.*) read before a German society notes of a case of papilloma of the ovary which was attended with the usual alarming clinical symptoms. There was profuse ascitic effusion, and the growths, on the other hand, formed relatively small tumors. The omentum was adherent, and small papillomatous bodies were found on the peritoneum of Douglas' pouch. On microscopic examination the growths were found to be histologically innocent. Elischer considered that these innocent papillomata were more frequent than is generally suspected. He had examined a tumor which formed a very large cauliflower mass. It was lined with a single layer of cylindrical epithelium with cilia. The opposite ovary was diseased in the same manner, and was so firmly adherent in Douglas' pouch that it could not be removed. Recurrence does not seem to have occurred, but the date of the operation was not noted by Elischer. Tauffer insisted that some papillomatous growths of the ovaries were essentially innocent, others distinctly malignant. None of those who joined in the discussion suggested any way by which the two classes might be distinguished in their earlier stages.—*British Medical Journal.*

Reviews and Bibliography.

A Treatise on Appendicitis. By JOHN B. DEAVER, M. D., Surgeon to the German Hospital, Philadelphia. Containing thirty-two full-page plates and other illustrations. 168 pp.

Perhaps there is no disease to which mankind is liable that at present attracts more attention than appendicitis. It has even got to be a nursery word, and babies almost threaten one another with it, should cherry or grape seeds be swallowed, and some fond mothers have got to removing blackberry seeds from their jam in the fear that appendicitis may get into the family.

It is an opportune time then for such a work as this by Dr. Deaver, and his is a work befitting the opportunity. It may perhaps be justly claimed that more must be learned before more can be said in elucidation of the subject.

The first sentences of the chapter on Etiology ought to find their way into the nursery. "The earlier writers on, appendicitis," says the author, "usually held that the main cause of this affection was the presence of a foreign body in the appendix. Since, however, the true character of the disease has become known, the presence or absence of a foreign body, such as a cherry stone or a grape seed, etc., has played little part as an etiologic factor."

In the matter of operative treatment the author is less radical than many surgeons, but would still be regarded as rather radical by the great majority of general practitioners who see so many cases in mild form get well. Altogether the work must be productive of great good. D. T. S.

Diets for Infants and Children in Health and Disease. By LOUIS STARR, M. D., Editor American Text-Book of Diseases of Children. Price, \$1.25. Philadelphia: W. B. Saunders. 1896.

We have taken occasion in previous reviews of books on diet to say that we much doubted if the authors paid regard to them when they were choosing a regimen for their own personal use. In a general way they are doubtless helpful, but burdened by infinite particulars they repel close attention.

This difficulty has been ingeniously met in the present work as far as regards infant feeding. It consists of ready-made prescriptions bound in book form, the leaves being perforated so that they can be readily removed when the prescription is made.

These prescriptions cover the time from birth to childhood, being appropriately designated for each period. All the doctor has to do is to find the

appropriate prescription, mark off what may not seem needed, write in the quantity of such items as are approved, and what is ordinarily a puzzling task is done. The work marks a distinct progress in its line. D. T. S.

Borderland Studies. Miscellaneous Addresses and Essays Pertaining to Medicine and the Medical Profession, and their Relations to General Science and Thought. By GEORGE M. GOULD, A. M., M. D., formerly Editor of "The Medical News." 380 pp. Price, \$2. Philadelphia: P. Blakiston, Son & Co. 1896.

This book is made up of a series of essays contributed to *The Forum*, *The Monist*, *The Open Court*, and *The Medical News* by the gifted author of Gould's Dictionaries. While not calculated to place the author ahead of Emerson, they certainly will add to his reputation as a versatile and resourceful thinker and worker.

There is one feature about nearly all of them that somewhat impairs the prospect of durability. Instead of being led contemplatively to watch the author's calm and quiet unfolding of truth, the reader is constantly looking about for the antagonist in the case who is receiving the fire. The essays are all vigorous and afford food for thought. D. T. S.

Diet for the Sick. Contributed by MISS E. HIBBARD, Principal of Nurses' Training School, Grace Hospital, Detroit, and MRS. EMMA DRANT, Matron of Michigan College of Medicine Hospital, Detroit. Second edition. Enlarged. Limp Cloth, 16mo, 100 pp. Price, 25 cents, postpaid. Detroit, Mich.: The Illustrated Medical Journal Company. 1896.

In this little book there is, besides the usual formulæ for "Sick Dishes," foods and cooling drinks for convalescents, quite complete Diet Tables for use in anemia, Bright's disease, calculus, cancer, chlorosis, cholera infantum, constipation, consumption, diabetes, diarrhea, dyspepsia, fevers, gout, nervous affections, obesity, phthisis, rheumatism, uterine fibroids. It also gives various nutritive enemas. The physician can use it to advantage in explaining his orders for suitable dishes for his patient, leaving the book with the nurse.

Practical Points in Nursing for Nurses in Private Practice. With an appendix containing Rules for Feeding the Sick, Recipes for Invalid Foods and Beverages, Weights and Measures, Dose List, and a full Glossary of Medical Terms, and Nursing Treatment. By EMILY M. STONEY, Graduate of the Training School for Nurses, Lawrence, Mass., and Superintendent of Training School for Nurses, Carney Hospital, South Boston. Illustrated with seventy-three engravings in the text and nine colored and half-tone plates. 456 pp. Price, \$1.75. Philadelphia: W. B. Saunders. 1896.

The aim of the author is to explain in popular language and in the shortest possible form the entire range of private nursing as distinguished from hospital nursing, and to instruct the nurse how to meet various emergencies when thrown on her own resources. Especial effort is made to instruct the nurse how to improvise every thing ordinarily needed in the illness of her patient. The glossary appendix would strike many people as a waste of effort. D. T. S.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, of New York City. In Twenty Volumes. Vol. VIII. Diseases of the Digestive Organs. 667 pp. New York: William Wood & Co. 1896.

The contributors to volume eight are B. Farquhar Curtis, M. D., New York, Max Einhour, M. D., New York, Reginald H. Fitz, M. D., Boston, James M. French, M. D., Cincinnati, J. Ch. Huber, M. D., Bavaria, Werner Kummel, M. D., Breslau, Hans Leo, M. D., Ph.D., Bonn, and Johann Mikulicz, Breslau.

The authors announce that owing to unforeseen difficulties in the preparation of volume seven it has been found necessary to issue volume eight out of its natural order. Volume seven will be the next to appear.

As this great work progresses, the magnitude of the enterprise continues to grow on the reader, as well as the capability of the promoters and workers. This volume is so entirely devoted to one class of diseases that it might stand alone as a text-book among the very best of its class. A characteristic feature of the work is that the editor has directed it distinctly on practical lines, while the discussion of the nature and cause of disease goes deep enough to embrace all known principles that find ready application, and such speculations as carry with them a degree of probability amounting to a reasonable certainty every thing of the nature of pure speculation has been eliminated. In this regard the work has taken a cast decidedly American, whatever may be the nativity of the contributor.

The article on peritonitis, considered in relation to its various causes, is especially full and graphically written. "Twentieth Century Practice of Medicine" gives guarantee of forming in itself such a library as few can afford to and none who know it will willingly do without.

Manual of Medical Jurisprudence and Toxicology. By HENRY C. CHAPMAN, M. D., Professor of the Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia, etc. Second edition, revised. With fifty-five illustrations and three plates in colors. 254 pp. Price, \$1.50. Philadelphia: W. B. Saunders. 1896.

A very marked improvement characterizes this manual of Prof. Chapman over the previous edition, the most distinct gain having been made in clearness and charm of style. These literary defects have seemed to detract from the previously published works of the distinguished Philadelphia teacher. This little book will do much toward stimulating the study of medical jurisprudence hitherto so much neglected, and even now only beginning to receive the attention that it should.

D. T. S.

Foreign Correspondence.

LONDON LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

Dr. Payne on Harvey and Galen; The First Recorded Inquest; The Easiest Death; London Sewage Works; Cremation of Medical Men; The Guild of St. Luke; Sir William Priestley on Vaccination; Medical Men per Population, etc.

Harvey and Galen were the subject of the Harveian oration delivered by Dr. J. Frank Payne at the Royal College of Physicians. Aristotle and Galen were, he said, the real predecessors of Harvey in his work in connection with the heart, as it was by the labors of the Greek school of anatomists that the problem, though by them unsolved, was brought to such a point that Harvey was enabled to solve it. Dr. Payne contended that literature brought together thinkers widely separated in place and time, and, as one magnet made other magnets, the activity of one great mind set other minds in vibration. With the revival of the study of history in a wide sense there was evident a renewed interest in the history of medicine, a subject in which our own country, it was to be confessed, had done less than any other civilized States. It was as a small contribution to this history that he endeavored to give a sketch of the relations of Harvey to his predecessors.

It is stated that the first inquest was held in England in 1200, when six and twenty venerable persons were summoned to hear testimony regarding the death of Martin Bolsover, who was found dead, evidently murdered. They sat for seven hours in the open, with the body near by on the ground covered with straw, and refreshed themselves with draughts of ale, but, notwithstanding, Bolsover's death remained a mystery and his murderer undiscovered. It is also interesting to note that the foreman of the jury is alleged to have been ninety years of age.

The statistics furnished as to the number of medical men per population in the different European countries, show that Great Britain appears to be most favored in this respect, and Russia the least. In Russia there is only one medical man to every 6,000 of the population, in Germany one to 3,000, in France one to 1,800, and in England one to 1,600. The rate mortality is said to be lower, however, in Russia than in England.

Prof. Heim, of the Zurich Alpine Club, says that the most enjoyable way of dying is to fall off a precipice. He says that as soon as the foot slips there is a strange sense of ease and a deep feeling of resignation, but no terror. As in drowning you go through your own affairs, and then hear

music; unconsciousness comes on without pain, occurring just when you cease to fall, which but plainly means when you are at the end of the drop, and although your bones are broken and you are generally severely damaged you know nothing about it, you certainly hear the noise made by your body in striking the ground, but that is all.

It has been found that through the gradual increase of the population of London that the sewage works at Crossten, on the lower Thames, are unable to cope with the amount of matter which arrives daily, consequently the outfall works are being largely added to and altered. Three river-water settling ponds are being constructed for the purpose of obtaining a good supply of clean water for circulating through the condensers of the main engines. Greater changes in the treatment of the sewage may be looked for before long, it having been proved as the result of long and minute experiment that sewage is best treated bacteriologically. The sewage was passed through filter-beds composed of breeze or other materials, the organic matter in the sewage being reduced to its original mineral elements and absolutely destroyed as organic matter by the action of living organisms. All the solid matters in suspension are mechanically strained, then they are destroyed by forced aeration, the clarified sewage being purified by bacterial oxidation of its dissolved organic matters in an artificially aerated filter. The chemicals which are expected to be saved by this method will represent a great advantage to the rate-payers.

During the month the remains of Dr. Langdon-Down and Surgeon-General Sir William G. Moore have been cremated at the crematorium of the Cremation Society of England near Woking.

The thirty-second anniversary of the Guild of St. Luke has been celebrated with a service in St. Paul's Cathedral. The Guild is formed of students and practitioners of medicine who are churchmen, and it having been thought desirable to imitate a ceremony analogous to that which exists among lawyers when Her Majesty's judges attend St. Paul's in state, the Lord Mayor of London and Sheriffs were present in state, and many members of the Guild wore the gowns and hoods of their academical degrees. Among those present were Sir W. Broadbent, Sir W. Priestley, Dr. Mrs. Barry and Dr. E. Symes Thompson, the Provost of the Guild of St. Luke. The First Lesson was read by a clergyman who is also qualified as a medical man, Rev. H. Arnott, F. R. C. S., and the second by the Rev. D. Belcher, M. D. The Bishop of Stepney, who preached in the place of the late Archbishop of Canterbury, referred to the training of the young medical man. He had played his little part in helping to develop in the last thirty years the wonderful schools that existed at Cambridge and other places. The Bishop had seen the science of medicine and surgery grow from what used to be a simple matter in the hands of three or four professors, had watched it become subdivided again and again, till at last we had come to realize that there was no part of nature so trivial or small that it might not be made the subject of the study of the very highest intellect, requiring, labo-

ratories, experimenting rooms, and machinery of the most costly description. He did not wonder that the young man, under these circumstances, became instinctively what was called a materialist. He was certain that religion could not do without science, and had a very profound conviction that science could not do without religion. In the harmony of the two, each in its own perfection and in its own sphere, he found the healing of this world and the building up of the next.

Sir William Priestley, M. D., M. P., in his introductory address before the medical faculty of University College, Liverpool, said the medical student at starting should fully appreciate the fact that the true physician is generally in the position of a constitutional minister, only exceptionally in that of a master. He interprets Nature's wants, removes hindrances out of the way, sometimes, it may be, restrains and controls her. Speaking of vaccination, Sir William said that it may not yet be so perfect that it produces absolute immunity from smallpox, nor may it always be so performed as to preclude occasional misadventure, but its value and beneficence are undoubted. To abandon it because of the occasional miscarriage attending it would be just as rational as to abolish railway traveling because a certain number of people are killed and injured on railways in the course of every year.

The appointment of Mr. Thomas Bryant, F. R. C. S., to be Surgeon Extraordinary to Her Majesty in the room of the late Sir John Erichsen, Bart., has given great satisfaction to members of all branches of the medical profession.

The entries at the medical schools so far show a great falling off from some recent years, but complete returns are not yet made up.

LONDON, October, 1896.

INFLUENCE OF THE VAGUS ON THE SECRETION OF URINE.—Walravens (*Archives Italiennes de Biologie*, xxv, 2,) confirms the observation of Masius and others that faradization of the peripheral end of the vagus in the neck arrests the flow of urine. This effect is not, however, obtained if the animal is first atropinized. Hence Walravens considers that the arrest is due simply to the action of the vagus upon the heart and circulation, and not to any vasomotor fibers going from it to the kidney; if these existed they would not be paralyzed by the small dose of atropine, which obviates the action of the vagus upon the heart. The author holds that all the observed facts may be explained by the variations in the aortic pressure. Stimulation of the central end of the vagus is found usually to increase the flow of urine, though there is often no effect. This, again, is probably due to rise of blood pressure, and is related to the polyuria following puncture of the fourth ventricle. Walravens thus concludes that the vagus exercises no secretory influence on the kidneys.—*British Medical Journal*.

Abstracts and Selections.

THE USE OF ARGONIN IN THE ACUTE STAGES OF GONORRHEA. PRELIMINARY REPORT.—In the August issue of the *Journal of Cutaneous and Genito-Urinary Diseases*, Dr. George K. Swinburne, of New York, relates his clinical experience with argonin in the treatment of fifty-one cases of acute gonorrhea observed in his service at the Good Samaritan Dispensary. This drug is a combination of silver with casein, and is a white powder which, carefully heated with water over a water bath, forms an opalescent, viscid, albuminous fluid. The maximum strength of this solution is ten per cent; the reaction is neutral. Of the powder, fifteen parts contain as much silver as one part of silver nitrate. A peculiarity of this compound is that the silver is not precipitated by the addition of sodium chloride, nor is the compound decomposed by contact with albuminous substances. According to Jadassohn it possesses powerful germicidal properties; it is not irritating to the mucous membrane of the urethra even in the concentrated solution, nor is it escharotic; it possesses, however, no astringent properties. As his supply of the drug was limited, and as he was desirous of using it in as many cases as possible, the author adopted the following plan:

The patient was examined, history taken, character of the discharge noted, a smear taken on a slide and stained, and the patient made to urinate in two glasses always; then the urethra was irrigated with a very weak (1 to 6,000) solution of permanganate of potassium; if the anterior urethra only was affected, then the anterior urethra only was irrigated; if the posterior urethra was also involved, intravesical irrigation from the meatus was practiced; then the patient was placed on the table, and the anterior urethra slowly filled to distension, and the patient made to hold the lips of the meatus together for five to ten minutes. When posterior urethritis was present, I slid a small, soft rubber catheter, about 15 F., which had been cut off so that it was only seven inches in length, down past the cut-off muscle, and injected two drams of the solution into the posterior urethra, withdrew the catheter, and filled the anterior urethra. The catheter was lubricated with a solution of the argonin itself, which forms an excellent lubricant. I began cautiously with a two-per-cent solution, gradually increasing to the full strength (ten per cent), but after a few trials, finding that there was no inflammatory reaction and no pain caused by the solution, I used the full strength in all cases. The patients came daily except Sunday: a smear was taken on a glass slide and stained for gonococci

alcoholic beverages were cut off, but no special restriction of the diet was enforced, except that the patients were advised that milk and seltzer as a beverage was a good thing. Smoking was not prohibited.

In all the cases a rapid diminution in the discharge was noticed while they were under treatment, and in a majority of them there was noted a rapid diminution in the numbers of gonococci, and in several cases in which the presence of gonococci was established at the first examination these were not found in the smear taken on the third day; but in several instances, where the patient omitted treatment for a day or several days, there would be a slight increase in the discharge and a reappearance or an increase in the gonococci. In some of these cases the germ would be rather persistent, sometimes increased in numbers; but in several instances, especially where treatment had been omitted, the renewal of treatment would quickly eliminate them again.

One of the most noticeable features was the absence of any inflammatory reaction following this method of treatment; on the contrary, the inflammation of the disease *per se* is markedly diminished from the very start; even in the earliest stages the ardor urinæ is markedly diminished, in most cases completely so. Chordee was twice complained of, but inquiry as to what the patients understood by chordee established that they suffered from simple erections, which naturally were somewhat painful. The treatment itself caused absolutely no pain in any case, and frequent inquiry as to the effect of the injection elicited the answer that "there was a little burning for a while, but that was all."

A detailed history of a number of cases is given by S. Of those coming with a first attack he gave three which he considers remarkable. One of these cases is as follows:

Case 3457, first attack; discharge first noticed that morning; exposure three days ago; very slight, thin discharge; stained; epithelial cells, pus cells containing gonococci, and gonococci outside, free; both glasses clear; first contained one shred, which sank; argonin, ten per cent. The second day, no discharge; shred in first glass; argonin, ten per cent. The third day came without having passed the night urine: no discharge; one shred in first glass; stained; no gonococci; epithelial cells; argonin, ten per cent. The fourth day, same as yesterday. The fifth day, no discharge; patient notes watery discharge on rising in morning; urine held six hours; one shred in first glass, which floated, then slowly sank; stained; contained pus, epithelial cells, no gonococci; argonin, ten per cent. The sixth day, no discharge; urine held six hours; one floating shred in first glass; no treatment. The seventh day, same; no treatment; still under observation. This case I regard as cured at the first injection.

Another case similar to the above the author considered cured at third injection. He then goes on to say in conclusion:

I have used argonin in about a dozen cases of chronic urethritis which were rebellious to other modes of treatment, and have been impressed with

the results. My impressions regarding this drug are that it is absolutely harmless; that it shows marked power in causing the disappearance of the gonococcus; that it has peculiar power in allaying the inflammation of the disease, and I am strongly impressed by the degree of comfort that the patients possess even in the most acute stage. The only observation which I have not yet been able to make, on account of the shortness of time the drug has been in use, is the liability of these cases to relapse, and of this a further study must be made. Naturally, if the gonococci are all removed, there will be no tendency to relapse.

Jadassohn seemed to think that by the addition of 0.3 per cent liquor ammoniæ caustici he obtained greater power of penetration in chronic cases.

In forming a judgment of the value of the treatment in these cases it is to be borne in mind that they received only one injection a day, and none on Sunday; that as a rule they have to work hard to maintain themselves, and that many are machine operatives, probably the worst trade they could follow as regards this disease, and many lose their dinner hour in order to receive treatment.

THE SERUM DIAGNOSIS OF TYPHOID FEVER.—Widal describes a method (*Journ. de Méd.*, July 25, 1896,) of considerable importance in the diagnosis of typhoid fever by means of a simple reaction *in vitro*. Having inoculated separately tubes of bouillon with Eberth's bacillus and the *B. coli communis*, a few drops of serum are added to each from an animal rendered strongly immune for typhoid. After the first four or five hours the tube containing the coli bacillus becomes slightly cloudy, the other remaining perfectly clear. At the end of twenty-four hours the former is extremely cloudy all through, the culture of Eberth's bacillus being either very slightly so or not at all, the organisms being precipitated to the bottom of tube as a white flocculent mass. A drop of the coli culture examined under a microscope shows that the bacteria are isolated and characterized by great mobility. A drop of the Eberth culture shows sparse conglomerations of the organisms, which are immobile, thick, and deformed, for the most part being stuck together. The author finds that the serum of a thoroughly immune animal is much more active than that of the human subject convalescent from typhoid fever, and the greater the degree of immunity in the animal the greater the activity of the serum in producing this phenomenon, and he has been able to obtain marked results with the serum obtained from an immune ass in the proportion of 1 drop to 10 c. cm. culture. The author also finds that the serum retains this power when dried at the end of six months, it being sufficient to dissolve a fragment in some bouillon. He also carried out some observations with the view of discovering the effect produced by the blood serum from patients at different stages of the disease; for this purpose he examined six cases on the eighth, twelfth, fifteenth, sixteenth, nineteenth, and twenty-first day of the disease, and on each occasion he obtained the conglomerating and immobilizing effect with great dis-

tinctness. The method is as follows: A small quantity of blood is withdrawn from the bend of the elbow by means of a sterilized syringe; the serum is decanted and a few drops added to an inoculated tube of bouillon in the proportion of 1 to 10 or 15 parts of the latter. This is placed in the incubator, and at the end of twenty-four hours the flocculent precipitate will be found. This can be controlled by an inoculated tube of bouillon without the addition of blood serum, which will show a uniform cloudiness, and the difference between the activity of the organisms in the control tube and the conglomeration and immobility of the other is very marked.—*British Medical Journal*.

THE TREATMENT OF EXPERIMENTAL TUBERCULOSIS IN ANIMALS BY THE USE OF BLOOD SERUM.—In a paper thus entitled Dr. Paul Paquin, of St. Louis, at the twenty-second annual meeting of the Mississippi Valley Medical Association, said that the use of antitoxin went back to the active principle underlying immunization, an agent which is itself curative to a certain degree. Tuberculin was, to a degree, capable of modifying certain forms of tuberculosis. The inconvenience resulting was chiefly in the more or less severe reaction following. It was now maintained that tuberculin might be made with this poisonous principle eliminated. Experiments on guinea-pigs, unfortunately, did not give the same results as those made on the human subject. Furthermore, the experience of investigators with the serum treatment of tuberculosis varied greatly. They all, however, demanded of any treatment absolute cure of the tuberculosis when used on the human subject. We had been busy with all possible and varied forms of experimentation on smaller animals, but we were not always able to properly interpret the results of any given form of treatment and then make an exact application of those principles to man.

Of guinea-pigs inoculated with tuberculosis and then treated with serum, ten per cent were saved. Later results showed a very much higher percentage than this. Antitubercle serum was positively curable in many cases; it had passed the experimental stage, but yet we knew it was not perfect. Only a certain proportion of tuberculous patients could, with our present knowledge of tuberculosis and antitubercle serum, be treated successfully.

Dr. Longstreet Taylor, of St. Paul, said it was not necessary that the serum should produce an antitoxin in the body. It would in many cases give most gratifying results, but in others, for some reason, it was disappointing. His experience with the Paquin serum had not been entirely satisfactory, but he would give it further tests.

Dr. I. N. Love, of St. Louis, had heard several papers on this most important subject by the same author during the past four years. Maragliano had recently published his work on the subject. The treatment was now almost beyond the stage of experimentation, but we must not be too hasty in our conclusion, for at least ten years' experience was necessary before any thing would be positively and definitely known.

Dr. W. F. Barclay, of Pittsburgh, was satisfied that some such men as Paquin would demonstrate the ultimate success and positive value of anti-tubercle serum, and he hoped criticism would not discourage him and others.

Dr. H. W. Loeb, of St. Louis, remarked that at the last meeting he had presented some reports relative to the treatment of laryngeal tuberculosis with serum, and promised to report the results. While they had not been so good as he had hoped, yet they were such as to encourage still further attempts. Of the cases reported, in at least two the patients were yet living and well. As to two others he could not say, but at the latest reports there had been no return.

Dr. Charles Green, of St. Paul, said that the fallacy of medical statistics was best shown by tuberculosis. He had not much confidence in any such. Two centuries ago a cure for tuberculosis had been vaunted as infallible. *New York Medical Journal.*

THE PATHOGENIC ACTION OF THE MICRO-ORGANISMS OF FRIEDLAENDER AND FRAENKEL.—Flerhoff (*Th. de Moscou.*) points out that before the discovery of the Talamon (Fraenkel pneumococcus) Friedlaender described a bacillus which for a long time was considered to be the agent of pneumonia. More recently this rôle has been given exclusively to the pneumococcus of Fraenkel, although the latter is found as a saprophyte in the mouth and though in many cases of pneumonia it has been impossible to prove its presence. He has made experiments with a view of determining the real pathogenic importance of these two microbes, and has found that either of them may cause pneumonia, septicemia, or extra-pulmonary trouble, and that the pneumococcus seems to be more toxic, but that its presence in the expectoration is not pathognomonic. He concludes that neither of the two microbes ought to be considered the specific agent of pneumonia.—*British Medical Journal.*

CANCER OF OVARY; DISCHARGE THROUGH TUBE.—Fabricius (*Wiener klin. Wochenschrift*) writes of a woman, aged forty, who consulted Welponer in January, 1893, for suspected pregnancy. The period had ceased for a few months, but had been replaced by a continual discharge of bloody serum, with severe pain in the right iliac fossa. A swelling of the size of an orange lay to the right of the uterus. In June, 1893, the discharge, which had diminished, increased again, and the tumor was found to have grown larger. Chrobak removed it. He discovered a cystic carcinoma of the ovary upon which lay a much dilated tube. There were strong adhesions, and the tube burst during extraction, letting out much grayish pultaceous matter. A year later the patient remained free from recurrence. Fabricius found that the obstructed tube had become adherent to the cancerous ovary, and the latter had discharged much of its substance into the tubal canal. The new growth was epithelial. Winter described a similar case in 1887.—*Ibid.*

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÆ."

Vol. 22.

SATURDAY, NOVEMBER 14, 1896.

No. 10.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.
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A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

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THE CANCER RIDDLE.

Of all the specific diseases cancer has been and still is the puzzle of puzzles to the germ hunter.

For years the bacilli and cocci of many varieties and descriptions were suspected, tracked, pursued, and bagged, but only to prove, on final investigation, to be worthless game. Then came the plasmodium hunters who, flushed with victory in malarial marshes, marched with great faith and courage into the cancer morass. Their hunt was long and patient, and specific results were thought to follow, but the denouement was failure. And now the realm of zoölogy is to be abandoned, while the hunt reopens upon botanical lines.

The bacteria are to be abandoned and the more imposing torulæ, or their like (blastomycetes), are to be made the objects of the search. It has for many years been known that moulds, which are akin to blastomycetes, attack the skin, that the *oïdium albicans* has its habitat in mucous membranes, and that occasionally the parasite of *favus* goes down the esophagus and produces a fatal gastritis, while the *actinomyces*, in proliferating, form nodules analogous (in naked-eye appearances at least) to those of cancer.

The learned editor of the pathological department of the Boston Medical and Surgical Journal gives in a recent number a brief review

of the history of this new line of investigation, and a summary of conclusions which are encouraging if not convincing.

"Busse, in 1895, cultivated a species of blastomycetes, which was virulent for mice, from a case of chronic pyemia," and thus demonstrates pathogenic properties in this group of organisms. "That certain species of blastomycetes are capable of producing general infection in animals by the usual methods of inoculation has been recently conclusively shown by Sanfelice and by Lydia Rabinowitsch, who have independently tested a large number of the representatives of this group." "Pathogenic forms have been studied by Malfucci and Sirleo and by Curtis."

The author gives the following account of the experiments, results, and conclusions of Sanfelice, who has isolated two species of pathogenic blastomycetes, and who seems to be the leader in this line of study:

One of the blastomycetes was cultivated from a case of bovine cancer with calcareous degeneration.

Inoculated into various animals this organism showed a marked tendency to the production of nodules of newly-formed cells and the deposit of calcareous matter about groups of the organism. In general the formation of the nodules of young cells was most marked in animals which resisted the infection the longer, and in these the organisms were fewer in number, while in animals which succumbed comparatively quickly after inoculation there was little or no cellular reaction on the part of the tissues, and the number of organisms distributed throughout the viscera was large. The results of bovine inoculation are not yet reported. It may also be mentioned that the inoculation of the mamma of a bitch is reported to have been followed after several months by the appearance of nodules of a carcinomatous structure in the neighborhood of the gland.

With the other form of blastomycetes essentially the same effects were obtained except that the peculiar deposition of calcareous matter was not observed. In short Sanfelice thinks he has shown that the amount of cell proliferation with both forms varies directly with the power of resistance to the infection exhibited by the animal, and that the greater the amount of cell proliferation the fewer are the organisms present. This paucity of organisms in the older lesions is apparently accounted for on the ground that many of them are destroyed by the cells.

Reasoning by analogy from these observations, he holds that the malignant neoplasms of man are also due to infection with blastomycetes, his idea being that the human tissues offer sufficient resistance to the infection to cause abundant proliferation of cells and that these new growths are only a special phase of the same phenomena seen in his animals. He thinks that the various microscopical bodies which have been described in

malignant tumors in recent years, and which have been regarded by some as parasites, coccidia or psorosperms, and by others as merely degenerated or atypical tissue cells, are really blastomycetes.

In support of this view he states that the blastomycetes, as seen in sections of the tissue of inoculated animals, have the same appearances and staining reactions as these bodies, and he also calls attention to the fact that blastomycetes have been really cultivated from a cancer of the uterus by Kabane, from a myxoma by Curtis, and from sarcoma of the mesenteric lymph glands by Corselli and Frisco.

Notes and Queries.

A METHOD OF TREATING CANCER.—Stated briefly, I proceed as follows : Given a case of epithelioma or other form of cancer, I first carefully cleanse the surface of the diseased part with pyrozone, then dry it carefully. Using a ten-per-cent solution of cocaine I make the part thoroughly anesthetic. To the surface I then apply a full-strength solution of sodium ethylate. This strength is got by allowing the crystals (Merck's) to deliquesce. Then I apply a powder made as follows :

R	Acetanilide,	1 dram ;
	Aristol,	2 drams ;
	Boric acid,	1 ounce.

This powder is put on thick over the whole diseased surface. I then spread lightly with vaseline a piece of sheet wadding large enough to cover the whole surface, and put absorbent cotton and a bandage over this. This treatment is repeated as often as necessary, and a cure follows in from two to five weeks, according to the amount of tissue involved and the patient's general condition.

During the time of treatment the patient gets internally a three-grain tablet of protonuclein (R. & C.) three times a day. This is a most necessary part of the treatment. The value of protonuclein to increase the white corpuscles I need not dwell on here. Sufficient it is to say I believe the other treatment would be valueless without help from this agent.

I place my patient in such a position as to bring the bottom of the area horizontal, and fill the cavity with pyrozone, first having wiped all secretion carefully away, because this saves time. Then when the "boiling" ceases I dry the parts with absorbent cotton and pour in the cocaine, wait five minutes for it to act, and then dry it out with the cotton.

There is no more painful caustic than the ethylate, and even the precaution of using cocaine does not always entirely control the pain. When the ethylate touches the surface a peculiar change is noticed. If the wound is

clean the fluid spreads itself out rapidly, and where there is diseased tissue the part instantly turns black. The rest of the surface becomes brown. If the wound is not clean and is filled with the discharge of the cancer, the whole surface turns black.

One application is made at first over the whole surface. As soon as the black color is seen, the preparation becomes very gummy and tenacious, and should not be disturbed. Then the powder is dusted on, packing the wound fully. Considerable edema follows the first application, but soon disappears, and any pain stops as soon as the caustic action ceases by all of the agent being used up. The protonuclein no doubt helps here materially to remove the edema.

The vaseline is used on the wadding to prevent the dressings from sticking to the wound, and the cotton over it catches any discharge. It is remarkable what a soothing effect the vaseline has to the wound, and perhaps it aids in limiting the pain.

It is my practice to see the patient and dress the sore every second day, beginning just as if the case were a new one. But I am careful, as the cure progresses, to touch only such points as show disease and to avoid any forcible removal of dressings, so as not to disturb the parts to prevent bleeding. It is necessary to use a glass rod in applying the ethylate, because of its excessive corrosive action, and it is almost impossible to keep it in a glass-stoppered bottle. I keep it in small corked bottles and am careful not to let it touch the cork.

I have had four cases of epithelioma this year and have cured them all by this method. If this is worthy of room in your columns I shall be glad. For if it is the means of curing one case I shall consider my time very well spent. I will answer any questions gladly so far as I am able, and will show one cure, in a patient who has consented to this, to any physician who is near enough and who is interested.

For six years I have looked for a cure for epithelioma, and feel very sure that this treatment will answer in nearly all cases. I do not allege it to be a specific by any means. I do not remember where I first heard of the ethylate. It is interesting to note, however, that in the Medical Summary for October brief mention is made of such use for this agent. I use acetanilide and boric acid because of their well-known germicidal properties, and aristol because we have no better healing and scar-forming agent.—*Albert S. Atkinson, M. D., in New York Journal, October 17, 1896.*

COMPARATIVE TOXICITY OF THE DIGITALIN GROUP.—M. Piotrowska (*Thèse de Genève*) reports the results of a study of the comparative toxicity of the substances of the digitalin group according as they are administered hypodermically, intravenously, or by the gastro-intestinal canal. The substances experimented with were different digitalins (Homolle and Quevenne, Nativelle), fluid extract of convallaria, convallamarin, strophanthin, coronillin, and helleborein. The experiments were made on frogs and on

certain mammals (rabbits, cats). The following are the author's conclusions: Fluid extract of convallaria is seven times less toxic in frogs when given by the gastro-intestinal canal than when administered hypodermically. Convallamarin in the frog and the rabbit is six times less toxic by the gastro-intestinal canal. Digitalin (Homolle and Quevenne) in the frog is three times, and digitalin (Nativelle) one and a half times less toxic by the gastro-intestinal canal. Strophanthin is six times, coronillin thirteen times less toxic by the gastro-intestinal canal. Helleborein in the frog is seventeen times, in the rabbit twenty-six times less toxic by the gastro-intestinal canal. In order to determine whether the liver plays a part in attenuating the toxicity of the poison introduced into the gastro-intestinal canal, the author investigated in the frog the modifications which extirpation of the liver produces, and in the rabbit the difference in toxicity of the substance introduced into a peripheral vein (jugular, femoral, auricular), and into a vein of the portal system (mesenteric). The results of the experiments in mammals did not always agree with those on frogs. Frogs from which the liver has been extirpated are six times more sensitive to extract of convallaria, twice more sensitive to coronillin, and eight times more sensitive to helleborein than in the normal state. Frogs in the fasting state are more sensitive to the action of fluid extract of convallaria, coronillin, and helleborein. In the rabbit the liver does not appear to lessen the toxicity of convallamarin or helleborein. Coronillin, on the contrary, is three times less toxic when injected into a mesenteric vein; its toxicity therefore seems to be attenuated by the liver.—*British Medical Journal*.

PEDIATRICS AS A SPECIALTY.—Dr. Samuel W. Kelley, the editor of the *Cleveland Medical Gazette*, has made a study of the extent to which pediatrics is taught in the medical schools of the United States and Canada and in some of the schools in the United Kingdom. In a presidential address delivered before the Ohio State Pediatric Society last May, published in the September number of the *Gazette*, he gives the points as to which he especially inquired and the information as to facts that he received from the various schools, together with expressions of opinion—very diverse, it may be remarked—concerning the degree to which it is practicable or desirable to make the diseases of children an exclusive specialty. What he says shows very plainly that during the last ten years great progress has been made in the teaching of pediatrics, and that branch has been so raised in rank in the curriculum that in several schools an examination in it must be passed satisfactorily or the candidate can not get the medical degree. We rarely hear now of a man's being "professor of obstetrics and diseases of women and children," which was quite the regular thing thirty years ago. With regard to the strict specialization of pediatrics Dr. Kelley himself seems to expect it and to consider it desirable. He does not agree with those who expect it to do more than keep pace with the march of general medicine and surgery. The progress it has made in the past twenty years,

URTICARIA OF THE RESPIRATORY PASSAGES.—Delbrel has collected (*Journ. de Méd.*) a large number of cases and records of this condition, and from these he draws the following conclusions: There are two types of urticaria affecting the respiratory organs: (1) In certain cases the cutaneous eruption appears first, and is followed by respiratory trouble; (2) in others the respiratory symptoms first appear, to be followed later by the eruption, and it is in this latter that the greatest difficulties of diagnosis and the greatest danger to the patient may arise. In many instances the urticarial affection so closely resembles other respiratory disorders that in the absence of any cutaneous condition diagnosis may be almost impossible, and it may even happen that the only manifestation of the disease is that affecting the respiratory mucous membranes. Some cases simply resemble an attack of asthma; others manifest themselves by suffocative attacks with irritating, hacking cough, closely simulating edema of the glottis, for which they may be mistaken. In such cases a laryngoscopic examination may be of great use, though, unfortunately, it may fail even in skilled hands, as it seems to cause increase in the symptoms. In the instances where it has been carried out, red, raised erythematous patches have been found in the posterior pharynx, and though it may be impossible to obtain a view of the eruption in the larynx or trachea, the existence of such patches in their neighborhood may be of use. In the cases where the respiratory affection is severe the symptoms may be the most alarming. There is no regularity as to the time of their appearance after the ingestion of some article of diet, etc. The author states that severe cases not infrequently end fatally; others may last for periods varying from a few hours to several days, and the appearance of urticaria seems to be a favorable sign. He suggests that in acute cases with severe pulmonary symptoms and no cutaneous eruption brisk friction should be applied to the skin in order to induce its appearance.—*British Medical Journal*.

had severe shivering pain in the left chest and violent headache. On admission there was labial herpes, signs of consolidation at the left base and characteristic sputum. Some improvement occurred. Seven days after admission a fresh crop of herpes appeared, and then a second pseudo-crisis took place. Consolidation appeared in the right upper lobe. About twelve days after admission the urine had the odor of sulphuretted hydrogen; lead paper held over it was blackened. Casts were present, and also groups of bacilli. These bacilli were not possessed of a capsule. In the sputum there was no smell, but the same bacillus was found. Cultures from the blood, drawn immediately after death, showed the presence in pure culture of the bacillus mentioned above. When a few drops of copper solution were added to the gelatine a brown color was developed, due to copper sulphide. No differences could be made out by culture in the bacilli obtained from the blood, urine, or sputum. The lungs showed consolidation in various stages. The prodromal stage of this pneumonia was exceptionally long. The SH_2 -producing bacillus was undoubtedly the cause of the disease. The author has not been able to discover a recorded case of hydrothionuria in pneumonia. The entrance of the bacillus into the blood, and its elimination by the kidneys are important; this elimination can be effected without obvious damage to these organs. In the complications of pneumonia, such as meningitis, otitis media, etc., the micro-organisms gain access into the blood, and settle down in other parts. Perhaps this penetration into the blood is not so uncommon. Further investigations are needed to show whether this occurs in the ordinary favorable cases of pneumonia or only in the severe ones.—*Ibid.*

THE ELECTRICAL TREATMENT OF TINNITUS AURIUM.—Jones (*Arch. of Otol.*, xxiv, 2 and 3,) states that many patients can be relieved of the distressing symptom of tinnitus by a course of galvanism. He thinks that the auditory nerve can be acted upon in the best way by a bifurcated or divided electrode which can be applied to both ears at once. The parts in contact with the skin should be not less than two centimeters in diameter. A pad of moist absorbent wool should be placed between the electrode and the skin. The indifferent electrode is placed at the back of the neck, and a galvanometer and a rheostat should be included in the circuit, which enables the operator to introduce or remove a resistance of ten thousand ohms quite gradually. When every thing is ready the current is slowly and steadily raised by the current collector to five milliamperes. As the resistance of the skin diminishes, the current will increase slowly, the galvanometer being allowed to indicate eight to ten milliamperes. If the current should rise higher, the rheostat must be brought into use to keep it at the proper strength. The effect of the application of the anode to the ears should be to diminish the noises; that of the cathode to increase them. The reverse sometimes happens, however, and therefore the patient must be tested to find out whether the current modifies the sound. If diminution

of sounds be produced, the prospects of improvement are good. If neither the anode nor cathode alters the sounds the prognosis is unfavorable.—*New York Medical Journal*.

CARDIAC SENSATIONS.—Becher (*Deut. med. Woch.*) remarks that sensations differing much among themselves arise in cardiac affections. Sometimes they manifest themselves in angina pectoris, at other times they are known as stenocardia and cardiasthenia. Cardiac sensations occur in valvular lesions, in diseases of the myocardium, occasionally in nervous affections, and more frequently in Graves' disease. Nothnagel investigated the sensations of valvular lesions. During three years the author made researches into this subject in Litten's polyclinic. These observations are attended with difficulties. In the normal heart the regular and normally forcible contractions do not produce sensations. Only after exercise or excitement are they perceived by the individual. The author's observations show that the simple cardiac sensations may be the result of (1) omission of the cardiac beat, and (2) increased force of the cardiac action, due to hypertrophy of the left ventricle, as for instance in aortic incompetence. In the former case the change in or absence of the stimulus produced by the omission of the cardiac beat is perceived. The perception of the immoderate cardiac action in cardiac hypertrophy finds an analogue in the perception of the increased cardiac action as the result of exercise. In the case of the intermitting heart the time between the dropping of the beat and the sensation can be ascertained by means of the kymographion. These cardiac sensations are to be classed among the sensations derived from organs, and the knowledge of these sensations is still deficient.—*British Medical Journal*.

TREATMENT OF TUBERCULOUS OSTEOARTHRITIS BY INJECTIONS OF CHLORIDE OF ZINC.—Ziématzky (*Rev. de Chir.*) describes the results of a trial on forty patients of the so-called "méthode sclérogène" of Lannelongue, of treating tuberculous disease of bones and joints by subperiosteal injection of a solution of chloride of zinc. A full description is given of the precautions taken by the author to avoid on the one hand general poisoning, and on the other hand circumscribed gangrene at the seat of puncture. It is asserted that this method of treatment gives excellent results when the tuberculous disease is attacked at an early stage, and before the development of suppuration and extensive caries. It is contra-indicated in cases in which question might arise of the performance of resection or amputation. Of the forty patients treated by this method, twelve were completely cured. Among the whole number of cases there were some of very serious affections of the hip, knee, and shoulder. Although the author was unable by injections of chloride of zinc to cure all his patients, he afforded in most instances some relief and amelioration. He found it necessary in certain cases to resort to other methods of treatment, such as erosion, arthrec-

tomy, and resection. According to Lannelongue this method of treating localized tuberculosis acts by setting up around each morbid focus a zone of firm connective tissue which, as it contains no lymphatics, shuts off the tuberculous deposit from the rest of the organism. Ziématzky explains the good results of the treatment in another way. It is well known, he points out, that a strong solution of chloride of zinc is a very active antiseptic agent, and consequently when injected it acts directly upon and kills the tuberculous bacilli.—*Ibid.*

THE ACTION OF PITUITARY GLAND.—Mariet and Bosc (*Archives de Physiologie Normale et Pathologique*) have investigated the effect of pituitary gland on animals, on healthy men, and on epileptics. Repeated feeding with ox's pituitary gland produced no effect on dogs; subcutaneous injection of a solution made by pounding the pituitary gland up in water only gave rise to slight and transient fever and a little wasting; intravenous injection of fluid, as might be expected, produced death from coagulation of the blood. In a healthy man pituitary gland by the mouth was not followed by any abnormality; subcutaneous injection led to slight general *malaise* and fever lasting for twenty-four hours. Pituitary gland was administered either by the mouth or by subcutaneous injection to twenty-one epileptics. It was found to increase rather than to diminish the number of fits, and in addition to produce a state of mental exaltation which in some cases was quite different from any mental aberration that they had previously suffered from. *Ibid.*

IRRIGATION OF THE DRUM CAVITY BY MEANS OF A NEW SOUND.—Courtade (*Ann. des mal. de l'oreille et du larynx*, May, 1896,) has devised a new hollow sound, absolutely rectilinear, with a lateral orifice at its extremity, which can work in a groove fixed in a handle, which makes an angle of a hundred and twenty degrees with the axis of the sound. Attached to a syringe by means of a short rubber tube, the handle is seized between the left thumb and index finger, and the sound is introduced directly into the drum cavity through the perforation in the drumhead. The sound will do no damage if the patient moves, as it is rectilinear. The force of the injection may be graduated by more or less energetic pressure on the piston of the syringe.—*New York Medical Journal.*

NORMAL MENSTRUATION AND PREGNANCY WITH UNILATERAL ABSENCE OF THE UTERINE APPENDAGES.—Chavannaz (*Journ. de Méd. de Bordeaux*) found in making a *post-mortem* examination of the body of a woman, aged sixty, who had been operated upon for intestinal epithelioma, that the right

Special Notices.

THE TREATMENT OF CHRONIC ECZEMA.—Chronic eczema in its various forms is a most annoying affection and in many instances extremely rebellious to treatment. This is well exemplified by the numerous remedies that are recommended from time to time. To obtain any permanent results it is not sufficient to rely upon external applications but attention must likewise be paid to the diet and hygiene of the patient. A plain nutritious diet should be prescribed with abstinence from indigestible or stimulating foods and beverages. The excessive use of tea and coffee and alcoholic drinks is often responsible in preventing the cure of these cases. As regards the local management of chronic eczema a remedy should be chosen which will relieve distressing itching, remove the scales and crusts, and by stimulating the circulation cause the absorption of existing infiltration in the corium or even in the deeper tissues. The remedy to be selected will depend upon the exact condition of the affected parts, but it would seem that we have in aristol a drug which is generally useful in this affection. Dr. J. A. Cantrell, in the *American Therapist*, speaks as follows regarding its use:

"The experience with the use of aristol resulted in better effects from the treatment of eczema in my work than it was even supposed it would. While Weissblum received favorable results in the seborrheic type, my experience will corroborate it as well as in the chronic variety in which Kraus and von Swiecicki report beneficial effects. I have found that this agent was only of benefit in those varieties wherein there was much infiltration and thickening and consequently the more chronic conditions. I have also found that in the squamous conditions the drug acted as a stimulant and soon gave that desired removal of the scales with lessened amount of itching which is so constant a symptom. In the vesicular and pustular varieties this drug gave a very excellent result after the removal of the decided inflammation which is a usual accompaniment."

JOS. WESLEY MALONE, M. D., Blythedale, Pa., says: I am so well pleased with Celerina that I can not refrain from citing several cases of interest. I prescribe it very frequently, and have never had it to fail yet. I used it in a case of chorea. The patient was a little girl, ten years old, suffering from an acute attack. The case had been given up by two physicians and was a very bad one. The usual remedies, phosphorus, arsenic, etc., had been used and had no great effect. I advised the attending physician, an old practitioner, and a good one, too, to try Celerina. He did not take much to the idea, but after urging him he consented, and the first dose gave relief. From that time the child got better, and in about four weeks was cured. It acted like a charm, and the old physician who had never used it, was so well pleased that I am sure he will try it again. I have prescribed it in nervous prostration, and have yet to find it to fail. It is pleasant to take, and produces no nauseating effects as other remedies do when used for some time. I frequently prescribe it with Aletris Cordial, and it also goes well with Peacock's Bromides. I shall continue to prescribe it, and shall watch its merits closely.

FAILURE OWING TO SUBSTITUTION.—I have read and watched what has been said of Sanmetto, and often wondered why I did not get any results from it in my practice. When I received my September Medical Brief, and again reading of the grand results advertised therein by the Od. Chem. Co., I went over the ground to try to find out the trouble. To my surprise I found that all my patients had been furnished and were taking palmetto, where Sanmetto had been ordered. I intend to watch this matter more closely.

P. J. GERLACH, M. D., Spokane, Wash.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

VOL. XXII. LOUISVILLE, KY., NOVEMBER 28, 1896.

NO. II.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

VAGINAL VERSUS ABDOMINAL SECTION FOR PUS IN THE PELVIS.*

BY WILLIAM D. HAGGARD, JR.

Associate Professor of Gynecology in the University of Tennessee; Late House Surgeon Woman's Hospital, New York.

The treatment of pus in the pelvis has passed through several transitional periods. The old unsatisfactory vaginal puncture gave place to the abdominal era inaugurated by Tait, and practiced by his followers. The removal of pyosalpinx through the abdomen was the innovation which, under the ceaseless scrutiny of the statistician, made the field of abdominal surgery the "cloth of gold" of surgical battle grounds. Then total castration through the vagina for double pus disease by the French school, and through the abdomen by the American school, engrossed the energies of gynecological operators. These methods have reluctantly given place to modern vaginal section. I say modern advisedly, because it has an essential distinction from the old blind vaginal puncture, with the incomplete evacuation of perhaps one compartment of a multiple abscess, when it is contrasted with the free vaginal incision, careful exploration, and thorough evacuation of all pus pockets.

In its present application vaginal section constitutes the most recent acquisition to pelvic surgery, and it bids fair to revolutionize the results in pus disease. It should also be a subject of gratulation that it is a distinctly American procedure. The assertion that the vaginal method

*Read at the ninth annual meeting of the Southern Surgical and Gynecological Association held at Nashville, Tenn., November 10, 11, and 12, 1896.

is practiced by men who are not expert as abdominal operators is incorrect. On the contrary its employment in the pelvic inflammatory conditions has been evolved by men trained and thoroughly competent in the other operation. Peculiarly enough the men who deprecate vaginal section as a blind procedure are the very men who ignore the advantages of the Trendelenburg position in abdominal work. Surely the fingers skilled in the enucleation of pus tubes through a small incision, unaided by the eye, can work equally well in similar maneuvers *per vaginam*.

We should never forget, however, that the pathologic interpretation of pelvic inflammatory processes, now remedied in part by vaginal section, has reached its present wonderful perfection by those fearless and intrepid abdominal surgeons, who rescued the pathology of pelvic inflammation from the myths of antiquity.

In the present inquiry our motive should be, not to champion the one or the other method to the exclusion of the other, but rather to accentuate the relative worth of the would-be rival methods and to determine, if possible, the positive indications and comparative merits of each. Unquestionably, the abdominal route affords facilities for visual inspection wholly wanting in the lower approach. The entire field of operation is kept under surveillance, and the attack on certain portions of the morbid masses can be made with entire confidence as to the safety of visceral integrity. Not so with the pus accumulations. If they are multiple, rupture and peritoneal soiling is inevitable, and that very circumstance is the supreme disadvantage of abdominal incision. While we have often seen the pelvis deluged with pus and no untoward symptom supervene, we have also seen patients rapidly perish within twelve hours from fulminant sepsis, the result of peritoneal contamination. Without doubt a large proportion of old pelvic abscesses contain so-called spent pus that can be spilled in the peritoneal cavity with impunity. On the other hand there is that distressingly large class of cases that with singular and classical unanimity succumb on the critical third day to overwhelming sepsis.

There is no certain way of distinguishing these cases clinically, and hence all should be regarded as virulent. This is a constant and irremediable menace. I have reported at another time a *series of col-

it be in the "unheard from precincts" and in the hands of the great unwashed? This is no reflection on the reported results of many excellent surgeons who do laparotomy with mortalities of 2 and 3 per cent. I insist that this mortality does not include consecutive sections for pus, nor has it ever done so.

Abdominal surgeons have developed and perfected a most exquisite aseptic technique in detail and *ensemble*. They penetrate the abdominal wall in less than a minute with lightning dispatch. They enucleate with dexterity and assured safety to bowel and bladder. Manipulation is reduced to a minimum. Irrigation is deprived of irritation by physiological salt solution. The technique of glass drainage was perfected to such a degree that we were loath to exchange it for the easier and more efficacious vaginal drainage. Methods for homologous approximation of the abdominal wound have been devised that cause it to heal with beauty and surety and with an inconsiderable number of subsequent herniæ. They accomplish all this with brilliant and sovereign celerity, and yet abdominal section as a routine practice for pus in the pelvis must inevitably fall into desuetude. Of course there remain many conditions where the abdominal route offers the best means of approach, notably tubercular inflammation of the ovaries and tubes. The removal of a small unilateral pus tube, out of the true pelvis, or attached to the anterior parietes, is much easier extirpated through the upper incision; yet Polk and others advocate and practice anterior colpotomy for this condition.

The alleged limitations and difficulties of vaginal section are exaggerated. The procedure is comparatively in its infancy. Continued application will broaden and specify the limits of its utility, and increasing experience will augment our manipulative skill and perfect our operative technique.

In addition to the indications and supremacy of vaginal section for evacuating and draining pus in the pelvis, presently to be narrated, its most signal advantages have been exhibited in exploration of the pelvis for adherent adnexæ and small intrapelvic tumors. With the exploring finger in Douglas' space an accurate diagnosis of retro-uterine tumors, inflammatory and adnexial, can be easily made, and surgical measures immediately instituted for their relief. In this connection I will refer to the practicability of inspection of the pelvic contents through the vagina with the patient in the dorso-Trendelenburg posture. (Pryor.) This is readily accomplished by retracting the posterior wall and the

opening in the fornix by the long retractor of Pean and lifting the uterus upward and forward under the symphysis by the anterior trowel retractor. The intestines gravitate toward the diaphragm and are further isolated by gauze pads. The appendages if not adherent, or having been freed, gravitate into the exposed area, where any appropriate conservative procedure can be applied under guidance of the eye. I have also seen the appendix through the vagina, and the possibility of treating pelvic abscess of appendicular origin through the vagina has been proposed.

It is unnecessary to suggest the ease with which pus is reached through the vagina. It is the natural approach and logical drainage avenue of the pelvis and its contents. The natural history of pelvic pus accumulations is to become walled off above from the abdominal cavity. Opening and clearing out these accumulations is virtually extraperitoneal. It may then be classed in the category of minor surgery, but it gives major results. There is absolutely no shock. Patients thus treated give no more solicitude than a plastic case, and convalesce as smoothly as from a curetting. The entire absence of risk warrants us in urging a patient to have it done. And about all patients so approached will give their ready consent. This is a very practical phase, and we can not ignore the prejudice and possible refusal of patients, especially in private practice, to submit to more formidable operations.

We can change methods, but we can not change the patient. Apart from these theoretical and general considerations is their practical employment. The application of methods to individual cases should be the determining factor here as elsewhere in surgery. We are too prone to make cases fit methods. In patients ill from prolonged sepsis, damaged kidneys demand short anesthesia: Anemia and asthenia preclude complete surgery, and simple vaginal section with drainage is elevated to the dignity of a life-saving procedure.

I would enumerate the special indications for vaginal section, aside from explorative purposes, in the three following classes of cases:

1. Early cases of acute suppurating salpingitis.
2. Incipient post-puerperal peritonitis.
3. Large pyosalpinx and true pelvic abscess.

In the first class will be found the cases from recent gonorrhea and from septic abortion. As illustrative of the first type, I will mention the case of a girl, nineteen years of age, who came to my clinic last

summer with a fluctuating, tender mass in the left side. She had had gonorrhea a month, and presented herself with considerable pain and afternoon temperature. I curetted her in a hovel and made a posterior section. Upon incising the peritoneum the usual small quantity of free serum escaped. I found the tube fluctuating and tense. The right side was absolutely clear. I deliberately punctured the distended tube with scissors and withdrew them opened. A quantity of clear serum gushed forth, followed at the last by a minute quantity of pus and blood that could be easily seen as it trickled over the blade of the depressor. The cavity was irrigated with saline solution and packed lightly with iodoform gauze. The peritoneal opening was occluded with a small roll of the same material which just entered it and filled the vagina. All gauze was removed on the third day. The peritoneal cavity had been entirely closed by lymph coagulum above the occlusive dressing. The sac cavity was reirrigated and packed every second day. On the seventh day her temperature and pulse rose for the first time, and examination revealed a tender mass on the right side. On the eighth day I made another section above and to the right of the previous one and found a "hydrosalpinx," in the descriptive rather than the pathological sense, which was in every way similar to the other one. I believe those serous effusions in the fallopian tubes were the preceding pathological conditions to pyosalpinx.

If this be true, and is the embryonal history of suppurating salpingitis in early gonorrhea and other inflammatory processes, the prophylactic value of vaginal section will be the greatest boon yet given to infected woman.

In incipient post-puerperal peritonitis Henrotin has taught us a simple lesson of pregnant truth. Associated with clearing and disinfection of the septic uterus, vaginal section with drainage anticipates pelvic peritonitis and adhesions following puerperal infection. In these cases, at autopsies, I have seen literally puddles of pus in the cul-de-sac. The extension of the septic process and pus production was so rapid that nature had not time to encapsulate it. In this and in the ordinary adhesion cases of puerperal suppurative peritonitis it would be rash in the extreme to incur the dangers of suprapubic section, where the simpler, more rational vaginal evacuation with uterine disinfection and drainage has every thing in its favor.

Opening of large pelvic abscesses *per vaginam* needs no espousal of mine. It is nature's safest method, and was the practice of our elder

criteria. I have seen the venerable Emmet evacuate large abscesses and drain them by a permanent tube fixed into the vaginal incision by silver sutures. He told me he had done it in selected cases for over thirty years. It was then, as now, the operation of choice. While it must be regarded in most old cases as temporary and undertaken for the relief of immediately dangerous symptoms, there still are many permanent cures. A case has been reported of incision of an ovarian abscess with subsequent pregnancy, the other ovary having been previously removed.* There are doubtless many similar cases at least of restored functional activity in an ovary previously the seat of suppuration. Such reflections should make us chary of ruthlessly condemning appendages, especially ovarian abscess. "No organ, whose function can be maintained should be sacrificed."†

Should simple pus-letting not effect a cure, subsequent operation for removal of the relics of previous ravages can be done at another session without the dangers incurred in the presence of pus. This is the chorus of our contention.

In old recurring puriform disease, where both adnexæ are so hopelessly destroyed as to demand extirpation, I believe the uterus should also be removed. In such cases the condition of the patient forms the only contra-indication for complete ablation. Not simply because it is a functionless organ and can be removed with low mortality, but because it too is diseased, and if left will continue to produce pain and prolong the disturbances of the artificial menopause; it may still be the seat of hemorrhagic discharge, may be infected or reinfected with gonorrhea, harbor tubercular bacilli and other germs and incubate cancer cells. In destructive bilateral suppurative disease of the appendages the uterus is enlarged by plastic exudation, may be infiltrated with pus or permeated with latent gonococci. The adhesions binding it in vicious malpositions are intensified, after the removal of the purulent extension processes, by readhesion of hollow viscera to denuded areas on the uterine wall.

Whenever the uterus is diseased by pyogenic infection beginning in its own cavity and extending and destroying the function and integrity of its appendages it should be removed. The subpubic operation is

abdominal wall can also be removed through the vagina, and whatever it is impossible to enucleate through the vagina can not be removed by the abdominal method, except at the price of procedures incomparably more grave and more laborious.”*

The field of vaginal section is to prevent suppuration in early cases; to anticipate it in puerperal cases, and to save life in desperate pus cases. It is simple, surgical, and safe. Its application to the pelvic inflammatory diseases of women and to pus in the pelvis is one of the greatest surgical triumphs of the age.

NASHVILLE, TENN.

BIOLOGY AND THE DUALITY OF MAN.†

BY T. B. GREENLEY, M. D.

It has been a matter of controversy for many years between some of the most brilliant men of modern times whether or not there existed in the universe any thing besides matter. Those termed materialists, as Spencer, Huxley, Tyndall, Haeckel, Drysdale, Voght, and others contending that matter only existed, while such men as Beal, Lotze, Helmholtz, Draper, Ferrier, Frey, Stricker, Koelliker, Wundt, Cook, and others contended for the spirituality of man.

Huxley claims that matter possesses all the essentials for the production of all the phenomena of life—that life had its origin in the deposit or slime found at the bottom of the sea, which he terms bathybius, from two Greek words, signifying deep life. This matter consists mainly of the debris of extinct animals and waste material which have been accumulating for indefinite ages. It contains some particles of jelly-like substances which Huxley regards as vitalized material, and thinks it the origin of all organized matter. In this view Haeckel and Strauss agree. This substance, in their estimation, bridged the chasm between inorganic and organic matter.

I believe no other author concurred with Huxley in this view of the origin of life except Strauss and Haeckel, but the latter was in such a hurry to bridge the chasm that he allowed his moneron to be produced by spontaneous generation in order to start evolution.

Prof. Tyndall, not satisfied with either of these views of the origin of life, discovered that atoms of matter possessed a double character-

*Second, *Annals Gynecology and Pediatrics*, September, 1896, p. 823.

†The third annual lecture pertaining to man, delivered publicly at Elizabethtown, Ky., under the auspices of the Hardin County Medical Society.

istic, but in the aggregate as one; that there was a physical side and a spiritual side possessed by each atom, which he termed a double unity. He derives his views in this particular from the condition in the earliest ages of the world's history. He says: "Motion, will, intellect, and all their phenomena were once latent in a fiery cloud." (Fragments of Science.) "I discern in matter the promise and potency of every form and quality of life." (Belfast Address.) "Who will set limits to the possible play of molecules in a cooling planet? Matter is essentially mystical and transcendental." (Fragments of Science.)

Since publishing the above Mr. Tyndall has greatly modified his views in regard to matter, but still does not seem to be entirely satisfied. He says, when he contemplates the action of life on matter, it becomes unthinkable. Dr. Cook's criticism of Tyndall's views of matter is very able and effective. (See Lectures on Biology.) But Tyndall must have been at a loss when he attempted to apply the well-known laws of matter to his newly discovered material. The properties of matter are regarded to be inertia, color, form, gravity, and extensibility. The absurdity of the thing is very palpable, as Dr. Cook remarks, when we come to ask what color is spirit or life, or how much does it weigh, or is it extensible, or what is its shape? The law of matter is that it possesses no inherent force, and when in a state of inertia would always remain so if no extraneous force was applied to it.

The parties who were so anxious to start life in this world independent of creative power, and, as they claim, in accordance with the laws of nature, did so in order to avoid the appearance of a miracle, as that would be contrary to what they regarded as true science. Huxley and Tyndall have abandoned their views in regard to the origin of life, but Haeckel, I think, has never renounced his spontaneous generation project, but admits that it could not result in our time, owing to the great change in the conditions of life. But it would seem, when we consider the time of the world's history when the moneron was made, that it would be just as easy to make one now. That was at a time when the globe was covered with water and before the carboniferous period. As this phenomenon had to take place in the water, and without carbon, and the probability of the absence of both physical and chemical forces, it would appear almost like a miracle to have had a moneron or any other animalcula made by spontaneous action. And it may also be said that Huxley's bathybius was not yet completely formed.

The great mind of Darwin was not so fully exercised in endeavoring to account for the existence of life on the globe. He very graciously allowed the Deity to create a few of the lowest forms of life. This was quite an accommodation, as it afforded him a starting point for his theory of evolution. Yet when he came to apply his forces of evolution to these low forms of life they would not work properly. They were not sensible of their surroundings, and of course environment had no effect in the way of improvement, and, as they had no parents or sex, heredity or sexual selection, or natural selection, were all without effect in the way of development. Darwin himself admits that the lower forms of life would not be benefited by the aid of natural selection.

Bathybius, after being claimed as the source of life on the globe for about five or six years by Huxley and his confrères, was all at once exploded, you might say, by accident. The ship *Challenger*, in 1875, in sounding deep water, brought up some of this celebrated material, which upon chemical examination was found to consist almost entirely of sulphate of lime, and when dissolved crystallized as gypsum. Of course then its life-containing element was abandoned.

There is little doubt but life preceded the existence of organized matter in the world, as we know that all organized matter, both animal and vegetable, that now exists or ever did exist, did not grow without life. Then the question arises, What is life, and from whence did it come? This is a question that has puzzled philosophers, both ancient and modern. Richerand says that "It is a collection of phenomena which succeed each other during a limited time in an organized body." According to De Blainville, "Life is the twofold internal movement of composition and decomposition, at once general and continuous." Mr. Herbert Spencer, in his work on biology, thinks this definition hardly broad enough, as it should have included "those nervous and muscular functions which form the most conspicuous and distinctive classes of vital phenomena." At one time Mr. Spencer's definition was "the co-ordination of actions," but since he has modified it to "the definite combination of heterogeneous changes, both simultaneous and successive, in correspondence with external co-existings and sequences." A late definition of life is suggested by Mr. G. H. Lewes: "Life is a series of definite and successive changes, both of structure and composition, which take place within an individual without destroying its identity."

Webster's definition is: "That state of animals and plants, or of an organized being, in which its natural functions and emotions are performed, or in which its organs are capable of performing its functions."

"And the warm life comes issuing through the wound." (Pope.)
"Full nature swarms with life." (Thomson.)

Sir J. E. Smith, the distinguished botanist, was of the opinion that in the vital principle we have a glimpse of the immediate agency of the Deity. He says: "I can no more explain the physiology of vegetables than of animals without the hypothesis of a living principle in both."

Moleschott says thought is motion of matter, but this is no more an explanation than it would be to try to account for the sentiment and the charm in a melody of Mozart's by saying "It's a motion of matter." Undoubtedly thought is accompanied by motion or action of the brain cells, but if we could see the organ in action the mystery of thought would be as far as ever from being solved. "This life, what is it but the pervading effect of the deific love and life vivifying all nature, and sustaining the animal and vegetable world as well as the world of mind."

"The difficulties of thought," says Picton, "the silence of the heavens, the actual breathing, deathless beauty of creation, commands us with an inspiration which the age will not resist, to see God, not so much as the meditative designer who makes, but rather as the eternal power which constitutes and is the all in all."

It is said by some great authors that it is a difficult matter to give a full and positive definition of life. We will now speak of some of the manifestations of life as represented in the phenomena of nature as pertaining to the growth of organized matter, both animal and vegetable: This process is observable in the earliest period of embryonic life, say from the fecundation of the ovum up to the maturity and even death of the animal.

Life exists in the bioplasm, that material which shapes the form and outline of both organs and body of the animal. It disposes of the nutrient matter as furnished by the capillaries in the weaving of the various tissues, as the nerves, blood-vessels, muscles, bones, etc., and at the same time preserving the proper form of the structure. This is a wonderful process in the history of life, and can not be properly accounted for or explained by any force aside from life or vital force.

Physical or chemical force is entirely inadequate for its explanation. Then there is apparent intelligence manifested in the shaping and outline of the animal as it grows from its embryonic life to its maturity.

It is said by physiologists that the genoblasts, or first principles of living matter, are exactly similar, both physically and chemically, in all animals, and that the microscope detects no difference in appearance or structure. Then there appears to be some mystery attached to the fact that every animal and plant is guided up into its growth from its germinal condition to its proper phylum or species. This special guiding influence has never been accounted for satisfactorily. Some say it is a law of nature, and agreeing with the law annunciated by the Creator, that like begets like. But we know there is no effect without a cause, and that the cause must be equal to the effect.

Sir Lionel Beal and others have demonstrated the fact, with the microscope, that the tissues of the body are formed by what might be termed a weaving process, and at the same time the outline and proper shape of the organs and body are maintained. They know it is a living process, but are unable to account for the cause.

"If one could hear aright the murmurings
Of some shore-stranded sea-shell as it sings,
It might be then that he would come to know
An inkling of the Planner's purposings.

"The weary shuttle can no more divine
Of how its thread looks in the whole design,
Than we poor shuttles in the hand of Fate,
Can fathom of the plan a single line."

Dr. Cook, speaking on this subject, says:

Take the twittering swallow under the brown eaves, or your eagle on the cliff, or your lion in his lair, the egg in each case is the source of life; and when the quickening begins there is nothing to be seen at the center of the egg but the structureless, colorless bioplasm. Nevertheless it divides and subdivides and weaves, in the one case a lion, and in the other a swallow, and in the other an eagle, and I affirm, in the name of all reason, that from the very first the plan of the whole organism must have been in view somewhere."

Dr. Hall advances the theory that it is the soul, which possesses a perfect outline and figure of the species to which it belongs. He says: "This figure, although intangible to the senses, yet an entity, is that which guides the formation of the embryo up to its phylum." In other words, it guides the shuttle in the weaving of the tissues and shaping the organs.

This hypothesis might apply to man, but not to plants and animals. The same governing supervision of growth as it respects species and varieties pertains to the latter as well as the former, and therefore it would not seem philosophical to apply it to man when it can not be applied to animals and plants. It so happens that in our studies of the laws of nature we now and then meet with problems that in our philosophy we are unable to account for, and conclude, like the late Prof. J. Tyndall, when he found something he could not account for, that it belonged to the unknowable. We therefore, as it respects the problem of the growth and form of the various species of plants and animals, can only say that it is one of the mysteries of Providence. As before remarked, this weaving of tissues by the bioplasts out of nutrient matter belongs alike to all organized matter—to the oak, the flower, the frog, the eagle, the lion, as well as to man.

"Life is a loom in action,
We furnish the woof and the weft,
The shuttle is ever in motion,
And the impress of deeds is left
Upon the unfolding pattern."

Dr. Cook produces this syllogistic argument in regard to bioplasm:

"Some force forms the part of an embryo. That which forms the parts is the cause of the form of the parts.

"The cause must exist before the effect. The force which forms the parts of an embryo, or of any living organism, exists therefore before the parts.

"The life is thus the cause of organization, and not organization the cause of life. Life therefore existed before organization. If it exists before, it may after."

The bioplasts are colorless and viscid, apparently of structureless substance, and the same in all animals. They throw off formed material, so that it constitutes nerve, brain, muscles, artery, vein, bone, and all the mechanism of the organism. Although of the same chemical composition in the eggs of the different animals, they weave tissues such as to produce different plans of these animals. Their action involves therefore both the formation of tissues and their growth according to the needs of the animal. Moreover, it involves the production of all these structures which in animal and vegetable organisms exhibit an adaptation of means to ends. Furthermore, it involves the co-ordination of tissues, secretion, and deposits in the organism.

"Tennyson sings with an emphasis of far-reaching thought in the following lines :

" 'Flower in the crannied wall,
I pluck you out of the crannies;
Hold you here in my hand,
Little flower, root and all ;
And if I could understand
What you are, root and all,
I should know what God and man is, and all in all.' "

"The plan of the whole organism is necessarily taken into view from the first stroke of the shuttles of the bioplasts that weave it.

"Haeckel calls the bioplasts plastids, but confesses they are mysteries."

Dr. Houghton, speaking of germinal matter, says: "Hence nutrition is a vital process, a living process, and is positive evidence of vitality, and no approach to it has ever been accomplished in the chemic laboratory, or in processes which are so called chemico-vital, and no human ingenuity will ever be able to duplicate the vital relations of living organisms operating under some unchanging vital force, which exists or presides in and over the germinal which continues under the operation of this force to produce its like and sustain growth upon one side and metabolism upon the other, as here are the two sides of life."

Embodied in the term "germinal matter" it is probable we find the secret of nature's arcana, and the life force is impressed upon it in some such way as the "Spirit of God moved upon the waters," and also when it was said, "Let there be light, and there was light." Matter, then, has been created, and the operative and effective force which was directing the changes upon the void of the great cosmos was the same intelligent mind and force which has directed the operations of the physical world ever since, no matter what the period of time may have been. So we establish a relation of mind and spirit with the material and spiritual of the universe, in which and of which we are a part. It matters but little to the philosopher, except he be an evolutionist, or to the scientific physician or scholar, except he be a doubter, what particular changes he observes in the modes of mind and force, if he but remember "One universal purpose through all the ages runs;" and thus, on such a basis, no cataclysmic results can be found in the realm of mind or matter. There are no results which are not worked out in harmony with divine law and purpose, and no "eagle's eye or scent of prey" but is the result of adaptation and purpose, and hence the biologic

result of cells in the construction of the eye and the nerves, with their acute sensibility, "like the bloodhound, amid all the traces of others than the one sought, will rapidly follow the right one without mistake to the end."

Huxley, after abandoning the bathybius theory of life, says: "The chasm between the not living and the living the present state of knowledge can not bridge."

Although all living forms of matter in the mode of growth are very similar, both vegetable and animal, yet there is a wide difference in some of their distinctive characteristics. The germs of some of the vegetable species may, under certain conditions, retain their vitality for long periods of time. For proof of this statement we might refer to some wheat which was found lately in the pyramids of Egypt, which was supposed to have been placed there during the reign of the Pharaohs. It was found, on planting this wheat, that it had retained sufficient vitality to sprout and grow.

There exists no species of animal or its germ which, deprived of its nutrient material, could endure more than a short time. Then, again, the growth of some vegetables is intermittent, as, for instance, our forest trees. During the cold season of the year they, you might say, go into hibernation, when all functions of life cease action. We might also state that a few of the inferior animals, such as the hedgehog, bat, and dormouse, although they fast during the time of hibernating, their functions of life are not suspended but greatly modified.

If the functions of life were entirely suspended for any length of time in an animal, resuscitation could not be effected. When once the bioplasts are dead they can not be revived. An animal going into a state of hibernation, having a large amount of adipose tissues or fat, can support life for a considerable length of time without deriving any nutrient matter from without.

Biologists say there are only three kinds of matter in the living animal, to wit: the bioplasm, or living matter, the nutrient matter derived from food, and the formed material. Of course, while the process of accretion is going on there is secretion and excretion, or dead, wasted material. This waste is no longer of benefit to the individual, and is thrown off by the various emunctories. Thence it will be seen that while the process of nutrition goes on in order to support the various organs in the performance of their functions of life, they at the same time excrete and throw off the waste material. Thus it may be said

we are living and dying at the same time. This process is kept up from the earliest period of embryonic life until the last bioplast is dead.

When we consider the magnitude of the universe, with the various planetary systems and their co-ordination with each other, the changes of seasons, the existence of all the creatures of our planet, all virtually under the supervision and control of man, the last and most wonderful and greatest of all, why should it be considered by any one, claiming to be versed in the principles of science, to be unscientific and of a miraculous nature for the author of all power to impart the principle of life or vital force to matter which emanated from the same source? Some scientists claim that any thing occurring of a miraculous character, which they can not account for philosophically, or on what they term scientific principles, is false, or without foundation in fact.

The laws which govern the wonders of the universe, the annual and diurnal motions of the earth, the ebb and flow of the tides, the change of seasons, the great sheet of atmosphere that envelops the globe, with all the various phenomena which we call the laws of nature, are so common to our observation and senses that they do not seem to partake at all of a miraculous character. But if some of them occurred only occasionally in the world's history they would be regarded in the light of miracles. For instance, if there had been only one comet seen, or one meteoric shower of stars, or one volcanic eruption in the past ages, in all probability any one of these phenomena would have been regarded as a miracle. Would it not be a miracle for a man, a lion, or a tree to grow without vital force. There are many things existing of which we are unable to give the whys and wherefores, but we know they have a cause equal to the effect, but as to what they may be we can only form an hypothesis.

If we would only, in regarding what we call the glorious works of nature which surround us, acknowledge the omnipresence of the Deity as their author, we would not think it a miracle, as before remarked, that He should impart life to what He has created. And I have thought that any one who really is a scientist, and believes that matter is the only thing existing in the universe, must doubt the existence of a Deity or Creator.

Can blind chance, under the direction simply of chemical or physical force, weave an eye, a heart, or a brain? Whatever the force applied to the bioplasts is, it must have a governing influence in shaping

an organ so as to co-ordinate with other organs of the system in the performance of their various functions. These effects must have their co-ordinate causes. We know by the microscope, as demonstrated by Prof. Lionel Beal, that the bioplasts weave the various tissues of the organs, but it does not show us the power or force by which the work is done. The force must be an entity intangible to our senses. Dr. Cook illustrates the force by the rower of a boat. The force is applied to the oars which propel the boat, but the genius of the rower guides the oars.

[TO BE CONTINUED.]

Reports of Societies.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, September 18, 1896, Dr. S. G. Dabney, President, in the chair.

Exhibition of Pathological Specimens. Dr. A. M. Vance presented a diphtheritic membrane expelled by a patient of Dr. Ray's, with the history that it came away in a paroxysm of coughing shortly after an intubation. Membrane and tube were simultaneously expelled. The tube had twice before been coughed up.

Discussion. Dr. J. A. Ouchterlony: It would be very interesting to have this specimen submitted to bacteriological investigation. The question always comes up in connection with these specimens as to the identity of diphtheria and croup. I must say that it does not look like a diphtheritic pseudo-membrane. Although we have very strong evidence of the identity of the two diseases bacteriologically, but clinically the distinction is very well marked, and indeed I have taught up to the present time that the two diseases are distinct.

Dr. F. C. Wilson: The specimen certainly does not present the characteristic features of diphtheritic membrane. I can recall five or six cases in which true diphtheritic membrane was expelled, and in these it was yellowish white and thicker than this seems to be. The important question of operation always presents itself in these cases. Of course where suffocation is impending the question is very quickly decided. Before intubation was introduced this question was more important than now, and the opinion of the doctor was often

overruled, and the patient left to his chances. As I said, I have had five or six of these cases that have expelled the membrane and gotten well. In one case a membrane about five inches in length was coughed up. I have always believed in the non-identity of croup and diphtheria, clinically at least. As Dr. Ouchterony has said, there are sufficient reasons for believing that bacteriologically the two diseases are the same. But I am in that respect, like a woman convinced against her will, of the same opinion still. As to the treatment, of course the antitoxin treatment is the one in vogue at present. I think much more care should be taken in examining into the condition of the kidneys before antitoxin is used.

Dr. S. G. Dabney: The specimen has opened a wide field for discussion. I have always believed in the unity of croup and diphtheria, and that the difference in symptoms is due to the part involved. Bacteriologically it is certainly established that croup and diphtheria are identical. I notice that in recent books they are classed as one. In States requiring reports of infectious diseases both croup and diphtheria must be reported. In regard to antitoxin, that of course is a very large question. I am a believer in it. I have read very closely the literature of this year, and am aware of only two or three men who oppose it, Elmer Lee, of Chicago, Winters, of New York, and Lenox Browne, of London. In this connection it is curious to note that Lenox Browne was one of the most enthusiastic advocates of Koch's lymph. It would be difficult to establish that the kidney lesions are due to antitoxin when they so frequently occur in cases treated without antitoxin. In my opinion the kidney complications have not been increased.

Dr. A. M. Vance: I know but little of diphtheria and the antitoxin treatment except what I read in the journals. I notice a statement of Boton in a recent article, that some horses have naturally considerable antitoxin in their blood. Speaking of antitoxin, I had a case of diphtheria in my own family followed by paralysis of the eye muscles and of the bowel. In this case the temperature when antitoxin was given was 105° ; in two hours there was profuse sweating and the temperature went down. In two other cases, where the children were in imminent danger of suffocation, Dr. Dabney treated them with antitoxin alone. I was very much astonished at the result, as I certainly would have tracheotomized one of these children if relief had not come at once.

Dr. Thomas S. Bullock: I have had very little experience with antitoxin, but that has been highly favorable. I have seen no bad

effects that I had not seen before in the ordinary course of the disease, and I certainly believe that it has a powerful effect for good.

Presentation of Clinical Cases. Dr. Vance: This gentleman has been kind enough to bring to the society this little boy, and he wishes to get your opinion as to the nature of the disease, and the treatment. The boy is nine years of age, and has had the trouble three years. I think it is a typical case of pseudo-hypertrophic paralysis, and have given an unfavorable prognosis. As these cases are liable to pass into the hands of the charlatan I should like the gentleman to hear the discussion. You will remember that I presented to the society some time ago a family of children with the same disease.

Dr. Curran Pope (present by invitation): I would like to call attention to the presence of good deltoids and the atrophic condition of the muscles from below the deltoids to the wrist.

Dr. Wilson: These cases are very unpromising, and it is difficult to say whether more can be done than tonic and supportive treatment. I have had no experience in this line of practice recently, and I do not think I could give any encouragement in this case.

Dr. J. G. Cecil: I could add nothing at all to the statements that have been made. I do not believe there is any hope at all in the treatment of these cases. My experience with this disease has been limited, but from what I know of it in a general way I do not see any reason for differing from the gentlemen who have spoken.

Dr. F. C. Simpson: Like the others who have spoken, I believe these cases hopeless.

Dr. Bullock: I can only reiterate what has been said as to the outcome of these cases.

Dr. Pope: I would like to call attention to several facts interesting to us as physicians but of very little interest to the child or its father. In the first place we are taught that this disease is hereditary and that the heredity comes through the mother. The only history that I can find in this case is that of cerebral hemorrhage on the father's side and nothing but a healthy condition of the mother. This is directly opposed to the usual history of these cases. The next unusual point is the exceptional condition of the arms. Ordinarily in the Leyden type of pseudo-muscular dystrophy the arms escape. I have seen a number of these cases at the clinics of Gowers, Charcot, Rosenthal, and others, and two cases on the *post-mortem* table. I have sections of the muscles of these cases showing the typical con-

dition of pseudo-muscular dystrophy. The sections show that this is not a neural atrophy; that is to say, the spinal cord is normal; the trouble is a muscular one. If we take these cases from the beginning, as the Germans have done, and examine specimens clipped from the muscles, there is in the beginning a hypertrophy, and later shrinking with a lipomatous condition. The mental condition of these children has always been a matter of great interest to me. I have never seen a case that did not show more or less involvement of the mentality, and the child before us is no exception to the rule.

I gave the gentlemen, as you all have given him, a very unfavorable prognosis. But I am one of those who do not believe in saying that nothing can be done. We should do all we can do; and if we fail we are sorry for it. The question whether much or little can be done is governed by the quantity of money this man has. If the patient were rich and able to spend a year or two years in an attempt to alleviate his condition or to check the progress of the disease, we can start in with the only thing that does any good whatever—rest. By rest I mean rest in bed—quiet rest that does not involve the action of a nerve center. We can not obtain the full effects of rest without massage and galvanic treatment. There are other important points to consider, especially in prophylaxis. This man has a daughter. That daughter should never marry. This is a fact which I believe doctors should insist upon. I told him also that his wife should never bear another child. In case such a misfortune should happen to them the mother should never suckle the child. It should be kept as much as possible in the open air and fed—overfed—and occasionally be given courses of cod-liver oil, arsenic, and strychnine.

Dr. Ouchterlony reported a case of double pneumonia with albuminuria and excessively rapid respiration. Recovery. Robert Phillips, negro, aged eighteen; born in Kentucky; single; occupation, bootblack; was admitted to the City Hospital, September 8, 1896. September 2d, he was on a spree. The following morning he had a severe chill and complained of a lancinating pain in the left side during inspiration. He remained at home, continuing to suffer from pain, cough, and fever, until September 8th, when he was admitted to the hospital. He presented then the appearance of severe acute illness; respiration labored and painful and extremely rapid; dorsal decubitus. He groaned with each inspiratory effort, which was shallow and interrupted. There was a great tenderness over the whole chest; tongue

coated and dry; entire absence of appetite; great thirst; urine scanty and highly colored, acid, and highly albuminous; chlorides almost entirely absent. Dullness under percussion throughout the whole left chest posteriorly and on the right side at the base. Well-marked bronchial respiration on both sides posteriorly commensurate with the area of dullness. Expectoration scanty, and sputum of a rusty color. Temperature 104° ; pulse 118. Treatment, strychnine sulph. gr. $\frac{1}{8}$ every four hours hypodermically; whisky, $\frac{1}{2}$ ounce every two hours; ammonium carbonate, gr. 5 every two hours. Had flaxseed poultice to chest. The following morning, the beginning of the seventh day of the attack, temperature was 100° , pulse 116, while the respiration had risen to 82. Dullness and bronchial breathing over both lungs posteriorly; the upper lobe of the right lung was involved. Eighth day, pulse 135, respiration 80, temperature 102.4° ; physical signs unchanged. On the ninth day moist crepitation began to be heard. The extreme rapidity of respiration continued up to September 12th, which was the tenth day of the disease, when the temperature had fallen to normal, respiration to 44. September 17th, the fifteenth day of the disease, temperature, pulse, and respiration had become normal. So far as the physical signs are concerned, Dr. Gavin informs me that they have disappeared in great measure. Tongue is clean, appetite good, bowels open, and the patient is convalescent.

The only thing in the case which entitles it to be reported is the extreme rapidity of the respiration, which, it being an adult, makes it phenomenal. I have never seen pneumonia in the adult in which recovery took place with such rapid respiration. Another important prognostic was the presence of albuminuria during the advancing stage. Jackson, of Boston, called attention to the fact many years ago, that this was an exceedingly unfavorable prognostic, and he showed that while, in these cases where there was albuminuria during the advancing stage, very few cases recovered, it was not such a bad prognostic sign during the later stages. Of course it is quite common to have albumin in the urine during the period of resolution, and then it is of no prognostic value. The powerful corroborative effect of hypodermic injections of strychnine upon the heart was, I think, very satisfactorily illustrated in this case.

Dr. Cecil: What would you think of the oxygen treatment in a case like that?

Dr. Ouchterlony: I have seen some few cases of pneumonia of extreme gravity in which a fatal result was averted by the use of oxygen

gas. This man got along so nicely that we did not see any necessity for it. I remember other cases in which oxygen was used most freely and no good was derived from it. The lives of the patients seemed to have been saved by the heroic use of strychnine.

Dr. Vance: I have not had a very extensive experience with pneumonia. Some years ago it was my fortune to be in the woods with four hundred and fifty men. I had fifteen cases of pneumonia in an old log cabin, and had no drugs, except quinine, Dover's powder, and whisky. I poulticed them, all using cotton batting, gave whisky liberally, and for the comfort of all was compelled to use the Dover's powder. All these cases recovered. I had another case in a boy at the children's hospital, suffering from an abscess in the groin following Potts' disease. The little fellow was suddenly taken with a chill, followed by fever, and double pneumonia was soon made out. Crisis came on the fourth or fifth day. He recovered from the pneumonia. About ten days after crisis we noticed the heart was pushed to the right side. Two days later I resected a rib and removed half a gallon of pus.

Dr. Cecil: The case is an exceedingly interesting one. It occurred to me, while Prof. Ouchterlony was making the report, that if oxygen was of any service it would have been useful in a case like this, where three fourths of the lung surface was involved. I have used oxygen gas, but with no good results that I could attribute strictly to it, and am disposed, as Dr. Ouchterlony has indicated, to rely upon stimulation of the heart in all pneumonia cases, believing it to be the point to which all treatment should be directed and not to the lung condition. Of all measures to this end there is none superior to strychnine.

Dr. William Bailey: I would like to remark upon a paper that interested me at the last meeting of the American Public Health Association, a paper read by Dr. Wyat Johnston, of Montreal, on some bacteriological work in connection with the serum diagnosis of typhoid fever. He showed that the typhoid bacillus of typhoid fever patients very early in the disease has an agglutinating effect upon the blood serum and that this property may be of value in the early diagnosis of the disease. This method it seems to me will be of particular value to us.

Abstracts and Selections.

THE JANET ABORTIVE TREATMENT OF GONORRHEA.—In a second communication on this subject, published in the *Centralblatt für innere Medizin* for October 10th, Dr. Berthold Goldberg, of Cologne, expresses his conviction that the early treatment of gonorrhea by means of frequent injections of a solution of potassium permanganate is a trustworthy means of aborting the disease. He gives a table of fourteen cases, in all but one of which he succeeded in curing the affection within so short a time as to justify the use of the term abortion.

Six of the patients were suffering from a first attack of gonorrhea, five were affected with a second attack, two had their third attack, and one was in his fourth. The treatment was begun in two days after the infection (twelve hours after the first symptom) in one case; in three days after the infection (twelve hours after the first symptom) in two cases; in six days after the affection (one day after the first symptom) in two cases; in seven days after the infection (one day after the first symptom in one case and an unnoted length of time in the other) in two cases; in eight days after the infection (one day after the first symptom in two cases and six days in one case) in three cases; in nine days after the infection (two days after the first symptom) in one case; in ten days after the infection (three and four days respectively after the first symptom) in two cases, and in twelve days after the infection (seven days after the first symptom) in one case.

Five injections sufficed to effect a cure in one case, six in three cases, seven in one case, eight in one case, nine in one case, eleven in one case, twelve in one case, thirteen in two cases, fourteen in one case, and fifteen in one case, while about thirty were employed in the case which, although finally cured in about a hundred days, was not aborted. In that case the patient went from the seventh to the tenth day without treatment. As a complication he had follicular prostatitis. The only complication in any of the other cases was bacteriuria in one case, which did not interfere with a prompt cure. The deep urethra was involved and had to be irrigated in six of the cases. The gonococci disappeared in one day in two cases, in three days in two cases, in five days in one case, in six days in one case, in ten days in one case, in eleven days in two cases, in twelve days in one case, in fourteen days in one case, in about fourteen days in one case, and in about a hundred days in one case—the case that was not aborted. In one case this detail was not recorded, but in that case all traces of the disease had disappeared in four days. In almost all the cases the urine ceased to show any signs of a discharge coincidentally with the disappearance of the gonococci, but in three of the cases not until after a period of

from three to six days; the urine was examined after intervals of from two to a hundred days after the subsidence of the disease. All the patients were allowed to go about as usual during the treatment.

When it was practicable Dr. Goldberg gave the injections himself twice a day, but several of the patients were unable to present themselves so often, and consequently used the syringe themselves for a portion of the time, employing a solution of the strength of from 1 to 2,000 to 1 to 4,000 and injecting only the anterior urethra. Moreover, in several of the cases the treatment by the author himself had to be intermitted for as much as three days. All things considered, this seems to be a remarkably good showing for the Janet treatment.—*New York Medical Journal*.

STUDIES OF THE BLOOD IN THYROID FEEDING IN INSANITY.—M. L. Perry (*Med. Record*, 1896, L, No. 9). The author restricted his observations to the morphological and numerical aspect of the corpuscles, making no attempt at chemical analysis, and has devoted most of his attention to the leucocytes. Ten cases were studied, comprising simple mania, puerperal mania, melancholia, insanity of pubescence, and paresis. The number of red blood corpuscles was not materially affected by the administration of the thyroid. In the stained specimens there was no deviation from the normal in the appearance of these cells. There was found no constant, decided, or characteristic change produced by the drug in the total number of white blood corpuscles. In some cases the leucocytes are found to be increased, in others diminished, in number, and the author's observation has led him to infer that the latter condition occurs more often. In no case did he see any thing like leucocytosis or any marked increase in the number of white blood corpuscles. In the differential count, however, there were some variations observed; there was an increase of the percentage of the small mononuclear cells or lymphocytes, and a corresponding diminution in the multinuclear neutrophils, in every case. The increase in the lymphocytes bore a fairly regular ratio to the increase in the dose of the drug, to which it is reasonable to suppose that it was due. This effect was first noticed on about the third day after the beginning of the treatment, and lasted till about three or four days after the treatment was discontinued. The small mononuclear leucocytes in stained specimens showed more deeply stained nuclei than similar cells in blood of the same patient taken before thyroid feeding had begun. Following Uskow, of St. Petersburg, in the conclusion that the small lymphocytes with deeply stained nuclei are the youngest elements in the blood, the author believes this indicates that the drug acts as a direct stimulant to the lymphatic or adenoid tissues, whose function is the production of lymphocytes. The author considers it a fact that the thyroid had no influence upon the mental condition of the patients while he sees some temporary amelioration in some cases. This amelioration he supposes to be due to the fact that some of the tissues intimately connected with the function of hematosis, previously sluggish, after stimu-

lation from a vigorous course of thyroid, elaborate and turn into the circulation some principle which has a beneficial action on the cortex.—*American Medico-Surgical Bulletin*.

SOME OF THE USES OF PHYTOLACCA DECANDRA.—In an article on this subject in the Medical and Surgical Reporter for October 3d, Dr. F. R. Millard, of San Diego, California, says that the alterative action of this drug, which alone makes it valuable, is primarily and principally on the sebaceous glands and on glands that are modifications of that type. There is no other purely vegetable alterative, he says, that so surely affects these glands for the sphere of its greatest alterative activity as poke root does. Hence it should, as a rule, be given alone, although in some cases it may be combined advantageously with burdock root.

In puerperal mastitis, before the inflammation has devitalized the tissues, the administration of poke root every three hours will abort it. Before the advent of sodium salicylate poke root was the author's main reliance in the treatment of quinsy; now he uses the salicylate until the acute stage is passed, and afterward the poke root internally and locally for some time. He states that when a proper preparation is carefully used it does not fail to permanently cure patients who have been subject to frequently recurring attacks.

In regard to the treatment of cancer, says Dr. Millard, if the administration of one part of saturated tincture of poke root and two parts of saturated tincture of burdock root is begun quite early it sometimes seems to delay the progress of epithelioma and scirrhus. It does not seem to have much effect upon either after ulceration becomes extensive, and none at all on sarcoma. Several patients, he says, who have undergone this treatment have had their lives prolonged, that is, the fatal termination did not occur until from five to ten years after the discovery of the tumor. In two cases the tumor, which clinically answered to all the requirements of incipient scirrhus, disappeared; in one patient for three years, and in the other for nine years, when both of them died from an acute disease. The author remarks that he can not affirm that either of these cases was true cancer, although they were so diagnosed by an experienced physician. *New York Medical Journal*.

THE CAMERA IN DETECTION OF CRIME.—The vogue of the Roentgen ray and the skiagraph continues. The great Li Hung Chang is said to have been comforted, and to bear with equanimity his historic loss of the yellow jacket and the peacock feather, now that he has found, by means of the "X-ray," the Japanese bullet he carries in his head. But in spite of the vogue of the new imponderable, the photographic camera continues to add to its achievements and to offer enlarged possibilities to the student of medical jurisprudence. The camera reproduces differences that the human eye can not perceive, and frequently represents objects with a wrong distribution of

light and shade, because there are colors which are not visible, but which possess actinic power.

The experiment, familiar to some, of photographing a practically invisible drawing, made with a solution of sulphate of quinine in water, and getting a clear, sharp result in the photograph, owes its success to the fact that quinine has the power of converting the violet, ultra-violet, and blue rays into rays of less refraction. Treatment of surfaces to be photographed with substances having powers similar to the power of quinine, and the employment of various sensitizers in gelatine emulsion, put within our reach results which a generation ago would have been deemed magical.

From the *Taglische Rundschau* we learn of a practical use of photography in the detection of crime that is novel and ingenious. The murder of a woman was traced to one of two men—her husband and a neighbor. Each had hairs upon his clothes. Dr. Jeserich, "the inventor of criminal photography," photographed the clothes of the suspected men, and the camera disclosed the fact that the hairs on the husband's clothes were from his wife's head, while the other prisoner had hairs from his own head on his clothing. The same scientist has shown that the differences in inks used in writing and in altering a document can be shown clearly in a photograph of the document. Even on surfaces from which, to the eye, all trace of writing has been erased the camera reveals legible characters; and the forger or thief fails of his purpose of irrevocably destroying the original purport of the document with which he tampers. Were all possible agencies known to science used by scientists in the detection of crime there would be "troubulous times" for malefactors.—*Medical News.*

A CASE OF STAMMERING DUE TO ADENOID VEGETATIONS AND THE RESULT OF TREATMENT.—More than fifty years ago such operations as excision of parts of the tonsils, parts of the tongue, amputation of the uvula, and division of some of the fibers of the hyo-glossus and genio-hyo-glossus muscles were, with more or less success, performed for the cure of stammering. These met with deserved opposition, because they were done empirically and not to remedy known anatomical defects.

Less than two months ago I saw a child whose speech, always defective, was growing worse. He had a peculiar catch in his voice, and had lately been almost unable to speak, especially before strangers. He was nervous, timid, poorly nourished, and had always suffered from indigestion. The problem in every case of speech defect is, what is the cause and what the effect. For instance: Does the stammering cause the indigestion or the indigestion the stammering? Any trick for the cure of stammering must be when applied to all cases a failure, because there are no two cases alike, and each case requires a separate study. Examination of this case showed

the base of the tongue, and even when no attempt at speech was made there were peculiar twitchings of the lingual and facial muscles. After careful study of the case for a couple of weeks, I made a diagnosis of chorea of the facial, lingual, pharyngeal, and laryngeal muscles, due chiefly to adenoid hypertrophies and in part to some deviation from the normal of the genio-hyo-glossus muscle and to defective vision. I etherized the patient and removed, with the curette, a mass of tonsillar tissue fully as large as a black walnut from the vault of the pharynx. I also divided the frenum of the tongue well back. Improvement has been so rapid that I have thought other operative interference unnecessary. The after-treatment, besides the application of glasses, has been along the line of elocutionary drill. The boy has evinced rather more than average will-power and intelligence, and his mother has greatly assisted in carrying out my directions. Two months ago he could not tell me his name, but now his speech is better than that of the average boy of his age.—*J. Hudson Makuen, M. D.; The Therapeutic Gazette.*

MAY TYPHOID BE ABORTED?—Dr. Louis Waldstein, at the New York Academy of Medicine, referred to the fact that Dr. Manges seemed to doubt whether typhoid could be aborted. German clinicians, like Wundelrich and Friedreich, had insisted for years that it was possible to abort this disease, and they resorted to calomel. The difficulty was to say that a patient who got well after three doses of half a dram of calomel had had the incipient stage of typhoid. All of us had seen cases of continued fever, with more or less coated tongue, headache, backache, general malaise, with or without intestinal symptoms, with or without indication of tumor in the splenic region, cases which seemed to be tending toward typhoid. He had seen quite a number of such cases, had always thought it was possible they were cases of beginning typhoid, and had once put them upon liquid diet and given them calomel. They were closely watched, and within a week or less were well. But a few cases, after remaining well two or three weeks, became ill again and had real typhoid fever. Was it not possible they had typhoid in the first attack, that this was aborted, and that the second attack was simply a relapse?

Dr. Newton, of Montclair, N. J., had seen pneumonia rapidly clear up under large doses of calomel. This was in accord with the teaching of the late Dr. Leaming. If pneumonia could be cleared up under calomel, why might not some cases of typhoid fever? If we should live to see the diagnosis of typhoid made as it was in diphtheria, we could tell more about the effect of treatment. In the army he had seen many cases of so-called mountain fever, which autopsy proved to be typhoid with intestinal lesions. The origin was not clear. He had used calomel and thought he had aborted an occasional case of typhoid, and he had seen such favorable results as had been attributed this evening to the cold bath—clearing up of the tongue, disappearance of tympanites, etc. It was not necessary for an antiseptic to kill all of the germs of a disease to be of benefit.—*Medical Record.*

THE EARLY MORNING HOUR THE BEST FOR OPERATIONS.—The hour for capital operations is by no means an unimportant consideration. A writer in Gaillard's Medical Journal says that in following the course of operative cases and various operators for a number of years in the hospitals of a large city it seemed that the early morning hour had a great many claims entitling it to serious consideration. A good night's rest, attained artificially if necessary, an empty stomach, the patient all ready for anesthesia upon awakening, the fear and dread of what is coming being crowded into the fewest possible moments, the whole day with active attendants constantly moving about and alive to every demand of the patient, the ability to run in and see for one's self how the case is doing during the first twelve to eighteen hours without encroaching upon the practitioner's allotted time for sleep, are a few of the points which seem to recommend an early hour. On the other hand, it can not be denied that it may be a source of greater task upon the surgeon's powers, especially if he be concerned and anxious, as conscientious men always must be, in regard to capital operations, and if this anxiety interferes with the operator's sleep. Even with this disadvantage he believes the operator capable of doing better work before he has become tired and annoyed by the various demands upon him during the early hours of the day. It would be impossible to compare the results, because of no data with which to make the comparison, but he believed that the men who have operated extensively in the early morning hours have never returned to afternoon operation as a matter of choice.—*Medical and Surgical Reporter.*

THYROID PREPARATIONS IN SKIN AFFECTIONS.—H. Swift (Australas. Med. Gazette) records his experience of the thyroid treatment in certain skin affections. In three well-marked cases of psoriasis the administration of thyroid tabloids was followed by success. Cases of chronic dry eczema with thickened and infiltrated skin were much improved, but if the eruption is at all inflamed or moist the condition is aggravated by thyroid tabloids. Two cases of alopecia areata showed no improvement after some weeks' trial of the same treatment. The author treated four cases of long-standing acne in the same way; in two of these, after prolonged perseverance, the result was quite satisfactory; in one there was no apparent change; the other was made decidedly worse. In urticaria, in impetigo, and in moist eczematous conditions, the treatment failed. In two cases of erythema multiformæ it had to be discontinued. The class of cases that in Swift's hands has derived the greatest amount of benefit is that of ichthyosis and the allied conditions of xerodermia and sclerodermia. He has had

to adults, and gradually increases the dose. In young children he commences with half a tabloid a day. When recovery is well advanced it is wise to lessen the dose gradually, and to give only sufficient to keep up the effect.—*British Medical Journal*.

ONE OF THE "AUTOCRAT'S" EXPERIMENTS.—Dr. Oliver Wendell Holmes once told a dinner party how he undertook to solve the enigma of creation. Having observed that when unconsciousness is consciously approached, as during the inhalation of an anesthetic—when the mind is on the confines of two worlds—there arise sublime and voluminous but fugacious thoughts; and having satisfied himself that in these thoughts, if they could only be caught and transcribed, there lay enshrined the secret of the universe, he determined that by a supreme effort of the will he would catch and transcribe them. So placing himself in his armchair, with pen, ink, and paper at hand, he inhaled the vapor of chloroform. As drowsiness stole over him, and just as unconsciousness was impending, those sublime and marvelous thoughts arose, and by a vigorous effort he seized his pen and wrote, he knew not what, for before he had finished he fell back unconscious. When he awoke, with trembling anxiety he turned to the sheet of paper on which he could read in scrawling characters, but quite legible, the secret of the universe, written in the words, "A strong smell of turpentine pervades the whole."—*Health*.

SPIRITS OF TURPENTINE IN THE TREATMENT OF BURNS.—H. L. McInnis (New York Medical Record) says that spirits of turpentine applied to a burn of either the first, second, or third degree will almost at once relieve the pain. The burn will heal much more rapidly than by any other treatment in the author's experience. He applies the turpentine as follows: After wrapping a thin layer of absorbent cotton over the burn, he saturates it with the common commercial turpentine, which is generally found in every house, and then bandages. Being volatile, the turpentine evaporates, and it is therefore necessary to keep the cotton moistened with it. When there are large blebs he opens them on the second or third day. It is best to keep the spirits off the healthy skin if possible, as sometimes pain is produced by its action.—*British Medical Journal*.

THE POPULATION OF THE EARTH.—The quinquennial census of different nations was recently completed. From 1874 to 1895 the total population seems to have increased from 1,391,000,000 to 1,480,000,000. The increase at the rate of five per cent should give 1,549,000,000 in 1900, and 2,548,000,000 in the year 2000. The fear expressed in Malthus' essay on population, that in course of time one portion of the population will be reduced to famine, seems not incredible, since the producing powers of the soil are limited, while those of reproduction of species are practically without limit.—*Medical Record*.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ."

Vol. 22.

SATURDAY, NOVEMBER 28, 1896.

No. 11.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.
JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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EUTHANASIA.

"When time, or soon or late, shall bring
The dreamless sleep that lulls the dead,
Oblivion! may thy languid wing
Wave gently o'er my dying-bed!"

So wrote Byron in contemplation of the end of his wretched life. The wish that one may "painlessly attain the end of pain" is as old as the reflecting mind of man, and modern medicine is certainly advancing toward a point which might make the wish an attainment.

For not only are surgical operations rendered painless by anesthetics, but acute painful diseases are made endurable, and death itself is well nigh robbed of its terrors by the "respite and nepenthe" of the skillful therapist.

So far modern medicine has shown an ability to deal with the problems of surgery and acute disease which would place it above the criticism of Socrates. But in dealing with the victims of chronic and incurable diseases the physician of to-day is almost as helpless as were the Asclepiadæ of the philosopher's era.

In the opinion of Socrates medicine and surgery should be applied to such cases as were curable, it being ridiculous "to pay so much attention to regimen and diet as to drag on a miserable existence as an

invalid in the doctor's hands. . . . Esculapius, it was maintained, revealed the healing art for the benefit of those whose constitutions were naturally sound; he expelled their disorders by drugs and the use of the knife, without interfering with their usual avocations; but when he found they were hopelessly incurable, he would not attempt to prolong a miserable life by rules and diet, as such persons would be of no use either to themselves or the State. Constitutionally diseased persons and the intemperate livers were to be left to be dealt with by nature, so that they might die of their diseases."

This method of neglecting the chronically diseased and incurable is in perfect keeping with the economic practice among the Greeks of casting on the rocks all bantlings who, in consequence of mal-development or inherited disease, were not thought fit to survive. These ideas of course are heathen, and by no means in accord with the system of Christian charity under which we live, but they were nevertheless expedient, and with modern appliances for softening the method of extermination might not be cruel, and perhaps not unmerciful.

Indeed, one of the arraignments which a strict application of philosophic principles must make against medicine to-day is that it promotes in much of its function the survival of the unfit. In too much care for the single life it forgets to be careful of the type, and in consequence the hereditarily diseased are kept alive until they have time to reproduce themselves, and thus perpetuate their infirmities through coming generations. Of course the Greek method of remedying the evil is not to be thought of, but certainly some wise restricting legal measures ought to be taken against the transmission of hereditary disease through marriage.

A natural and logical extension of this question is euthanasia for the relief of persons suffering with painful and necessarily fatal diseases. It has incidentally come to the surface several times during our quarter of the century, but seems to have enlisted only a few timid advocates on the one hand, with a host of vehement antagonists upon the other. A recent letter to the *New York Journal*, by the Rev. Charles W. Wendte, sets forth the question logically, cogently, and without offense.

He says:

Although I strongly advocate the destruction of certain people by humane methods, I am not willing that my position in this matter should be misunderstood. All pioneers of thought have suffered misrepresentation, and I desire, as much for the benefit which may result to the world as for

the defense of my own reputation as a humane man, to be thoroughly comprehended.

To my mind one of the most deplorable and moving sights in Christendom to-day is the condition of the incurably diseased among us, especially if they are also in impoverished circumstances. Society should do all in its power to relieve this class, alleviating their sufferings by all the resources known to modern medical science, and placing them above the mental distress and physical misery attaching to personal want.

But who is to take the responsibility? Certainly not the medical man. On the field of battle some latitude may be allowable to him, but in the ordinary course of life no single individual is to be intrusted with so grave a responsibility. Shall we, then, continue as now, powerless to relieve the fearful suffering of so many unfortunates, turning a deaf ear to their entreaties and leaving them but one resource—suicide? In the name of humanity I say, No!

A few years ago an engineer of eminence in France, afflicted with a terrible inherited disease, of which he had seen his own father perish under aggravated tortures, took his own life. In his will he explained the violence of his deed, and left to the French Government a large bequest for the establishment of a commission on euthanasia. The French Government, influenced, it was claimed, by clerical counsels, declined to accept the trust.

In this, I believe, it did wrong. Though I appreciate the difficulties attending the matter, and what special dangers to society it may seem to carry with it, I yet believe that the time is rapidly approaching when the painless destruction of incurables will be considered eminently wise, humane, and Christian.

As in the case of the French suicide, my theory meets with the greatest opposition in clerical circles. In the first place, I am told that He who gives life should take it. Now, I hold that in that case all capital punishment, all forcible resistance to personal violence which may cause death, all war, either offensive or defensive, is wicked and can not be justified. The murderer should go free, the assassin should go unchanged, and the greatest generals, in place of being lauded as patriots, should be condemned as malefactors.

It is plain therefore that this doctrine is untenable, and is constantly and rightly ignored by society. To go further, look at the thousands of diseased, suffering, tortured human beings who crawl on the surface of this fair earth—the offspring of human ignorance, brutality, guilt, and shame. Surely, if justice and humanity were to decide the matter, such unfortunate beings would never be allowed to come into existence at all. In fact, leading physicians have told me that they never permitted a human monstrosity to live after it was born.

But we ought to go a step further. It ought to be a universal law throughout Christendom that the child-bearing of idiots, criminals, the insane, and all incurably diseased persons should be prevented. How? By

making it necessary that the physician's certificate should precede the issuance of the marriage license. Go into the children's hospital and see the poor little innocents, malformed, racked, and tortured from no fault of their own. Afflicted with terrible, wasting diseases, without the possibility of permanent restoration, or even relief, death in many cases is only a question of weeks or months. Why insist on continuing the tortures so needless, so undeserved? Do my antagonists think that God loves to behold the agonies of infants?

Another thing which my clerical critics assert is that God sends pain to discipline and purify us, and we ought not to resist his will. In that case the discoverers of ether and chloroform were guilty of great impiety, and the monument to their memory in Boston should be pulled down.

Now I argue, as a general thing, that pain—excessive pain, I mean—does not purify the spirit of man. On the contrary, it blunts, hardens, and brutalizes it. Of course there are noble exceptions which go to prove this rule. By our present methods we drive men to suicide by our inhumanity toward them. A pitiful case in point came under my own observation.

Now, in order to put a check to such happenings, to put behind us all sickly, false sentimentality in the handling of cases such as I have cited, I suggest that there should be formed a properly constituted tribunal, acting only when duly called upon by suffering humanity, and then under every necessary safeguard and restraint. Let this jury consist of a number of medical men, representatives of the Government, and any others who might advantageously serve. To this tribunal have submitted any petition for examination and release which might be made by the incurably diseased and indorsed by their families. Then, if they were found incapable of recovery and sure to endure needless and great agony, the tribunal shall be empowered to gently, painlessly, and humanely put them out of suffering and give them a release into the better world. This, then, is my plan. The surgeon must give pain to effect a cure. So humankind, which, under God, gives life, may, in the divine spirit of justice and mercy, take it back again.

It may be urged that this theory is of pagan and not Christian origin. What of that? I am discussing its wisdom, not its origin. To lessen the sum of human misery in the world should be our chief endeavor as humanitarians, regardless of creeds, and the calm discussion of euthanasia, which is now in progress, encourages me to believe that under certain plain restrictions it will inevitably be adopted by all civilized and Christian nations.

The least that could be urged on this terrible question is the advisability of allowing a wretch whose sufferings have driven him to suicide

Notes and Queries.

PROTECTION FOR THE FUTURE WIFE AND CHILDREN.—Of the many sad cases a physician sees in his professional life I do not know of any more painful to contemplate than that of a newly married woman affected with a gonorrhea extending to the internal genitals and the peritoneal cavity.

I knew a girl in perfect health, of great beauty, of Junonian proportions, combining muscular strength with regularity of features and graceful movements, possessing a most amiable disposition, in brief, a paragon of a wife to make a husband happy. She married a nice young man in a good business. It was a match based upon mutual affection and esteem and held out every prospect of a long and happy union. But, lo! a week after her marriage she came to me with an abscess in one of Bartholin's glands and a profuse purulent discharge from her uterus. She was under treatment for months. The abscess was opened and drained. The uterus was washed out daily with powerful germicides, curetted and drained, and finally treated with electricity (cataphoresis of oxychloride of copper). We thought our efforts had been crowned with success, when during a menstrual period she was seized with violent pain in the lower part of the abdomen, had a temperature of 105° F. and a pulse of 140. Two days later a swelling appeared in the pouch of Douglas. In a few more days the swelling extended three inches above the symphysis. An incision in the vagina gave exit to a large amount of pus. The peritonitic inflammation continuing to spread, laparotomy was performed. Some pus foci were opened, but the appendages were found so imbedded in a mass formed by the uterus, the intestine, and newly formed tissue that their removal was impossible. Finally she died.

In many other similar cases the patients recovered for the time being, but only to lead a life of invalidism, interrupted by more acute attacks of peritonitis. Some got well after having their ovaries and tubes removed. Others went on ailing until I removed the uterus too. Some needed even more treatment in the shape of electrolysis or a second laparotomy to sever painful adhesions caused by the first.

This, then, is what awaits these poor women—dangerous inflammations, a life full of suffering, capital operations, or death. I do not mean to intimate that every woman who has connection with a man affected with gonorrhea invariably falls a prey to all these horrors, but every experienced gynecologist will bear me out when I contend that these cases are far from rare, and that the picture is drawn from life. A gonorrhea that invades the deeper parts is one of the most dangerous diseases of women, and ends often in invalidism or death.

Is there any remedy? There are things that even physicians do not like to speak of, and I have hesitated whether it is right or wrong to state in

print my personal conviction, but the hope that these lines may save at least some women from contamination, suffering, unsexing, or death, induces me to continue. . . . If then the young man decides to avail himself of the offers of those women who sell their questionable favors, he exposes himself to infection with syphilis and gonorrhea, both of which may be communicated to an innocent woman who has the misfortune of marrying him. Syphilis may cause abortions or give rise to the birth of a syphilitic child; gonorrhea leads often to the deplorable condition we have described above, and is a common cause of blindness in the newborn if it does not entail sterility.

A man may be willing to run the risk of being infected himself, but he has not the right to draw his future wife and his offspring into his own calamity, so much less so as their condition caused by his recklessness is infinitely worse than his own. Many a young man is not only indifferent to but often proud of having acquired a disease which sometimes does not inconvenience him more than a cold in his head, and yet this slight disease, which even has a pet name, may cost his future wife her life or result in life-long blindness of his child.

It is without comparison the best to be chaste, but if one has not self-control enough for that, let him protect himself in order to protect his future wife and offspring, and there is only one protection worthy of the name—the avoidance of immediate contact.

Before closing this article it may not be amiss to add that newly-married women may acquire pelvie inflammation from other causer than gonorrhea. Thus, the writer has seen purulent endometritis followed by salpingo-oöphoritis that took a year to cure in a case in which even artificial urethritis brought on by instillation of nitrate-of-silver solution failed to reveal the presence of any kind of cocci or bacilli in the husband. Apart from exposure to wet and cold, such a condition may undoubtedly be brought on by the too frequent indulgence in sexual intercourse often found in newly-married people.—*Dr. Henry J. Garrigues, in the American Medico-Surgical Bulletin.*

THE SIZE OF FRENCH FAMILIES.—Francisque Sarcey, commenting in the *Cosmopolitan* on one item of the last French census, says that in France not only are large families rare exceptions, but when met with they are sure of being ridiculed rather than admired, and no theatrical joke is more certain of applause than “the appearance on the stage of an Englishman and Englishwoman followed by fourteen or fifteen children, ranged in regular gradation like steps of stairs. Fecundity is in French mothers of families a sort of blemish. When a wife presents her husband with an heir, it is bad enough; if a second comes, she is pitied; if a third is on the way, those interested are angry, and the indifferent keep away; if a fourth—oh! if a fourth, there will be an explosion of indignation against the tyrant of a husband, of pity or of ridicule for the wife. But never fear—they are not likely to expose themselves to it. Among the middle class, and especially among

the Parisian middle class, families with one or two children are the rule. There has just been founded, under the presidency of Mme. Destilion, a league, the object of which is the encouragement of large families.—*Medical News.*

THE PHONENDOSCOPE.—Dr. Manges (New York Academy of Medicine, October 20, 1896,) exhibited the phonendoscope invented by Bianchi. It was modeled after the microphone, and intended as a substitute for the stethoscope. It consists of a small box of hard rubber, closed at the bottom by a diaphragm of ferrotype plate, and above by a hard rubber cover through which pass the two ear tubes. A strong metal spring presses against the center of the diaphragm, and against the cover of the box, being muffled at the latter end by rubber. For more accurately localizing the sounds, and for use when auscultation is performed through the clothing of the patient, a metal stem is attached to the diaphragm. Dr. Manges said that its inventor claimed that with its aid one could hear the normal sounds in the muscles and in the viscera. It could be used for all the ordinary purposes in which a stethoscope was employed, but his own experience had been that it offered no special advantage over the ordinary stethoscope in auscultation of the heart and lungs and that it did not fulfill the claims made for it. It was, however, extremely useful in mapping out the limits of the various organs. For this purpose, the stem should be placed over the organ to be outlined, and percussion made by stroking the skin lightly in the neighborhood of the instrument. In mapping out air-containing organs the strokes must be lighter than over solid organs or those containing fluid. For abdominal auscultation, including the detection of the fetal heart, it was excellent.—*American Medico-Surgical Bulletin.*

THE ACTION OF ETHER AND CHLOROFORM ON THE KIDNEYS.—Drs. Babacci and Bebi (*British Medical Journal*). As the result of a series of clinical observations and animal experiments on the effect of ether and chloroform narcosis on the kidneys, the authors find that in 29 per cent of the cases, after etherization, albumin was found in the urine, and in 18.89 per cent after chloroform narcosis. In each case the urine before the operation was free from any trace of albumin. The etherized animals showed renal alterations, consisting of diffuse hemorrhagic nephritis, with preponderating glomerulitis and multiple renal hemorrhages. This form of kidney disease has a tendency to spontaneous cure, and may be absolutely restored to the normal. In the chloroformed animal there occurred a parenchymatous nephritis, with a tendency to chronicity and frequent extensive degenerative changes in the epithelium. Thus once more the superiority of ether over chloroform from the point of view of safety, whether at the time of or after the operation, is shown; for, although albuminuria was more frequent after ether, it was transitory, and not accompanied by such grave changes in the renal tissues as are seen after chloroform.

SPECIAL HERNIAS IN WOMAN.—Waldeyer (*Centralbl. f. Gynäk.*) demonstrated at a meeting of the British Obstetrical Society some important anatomical researches as to the position of the ovary and other pelvic viscera. He maintains that the ovary lies in a shallow pit, which is really a triangle of peritoneum elevated at its margins, formed by the round ligament, the umbilical artery, and the ureter. This pit is sometimes very shallow, but it may be very deep, so that the ovary lies in it practically in a state of prolapse, and the peritoneum may even form a hernial pouch, which has been found projecting into the lesser sciatic foramen or into the greater, either above or below the border of the pyriformis. Waldeyer exhibited an incipient hernial pouch of this kind. He likewise showed an inguinal hernia containing the fallopian tube, and a pelvis with a defect in the symphysis pubis, into which a diverticulum of the bladder had forced itself.—*British Medical Journal*.

NOTE ON THE TREATMENT OF MEASLES.—The following abstract from the *Lancet* for June 20th is published in the September number of the *Glasgow Medical Journal*: In the early part of the present year an epidemic of measles of severe type attacked Northampton and the neighborhood. This afforded an opportunity to study the effects of treatment upon a large scale, and Mr. Dunley Owen, who had under his care upward of three hundred of the affected children, expresses the conviction that his low death-rate—only four children died—was due to the steady application of jacket poultices to the chest. He ordered the poultices as soon as there was reasonable ground to suspect an attack of measles, and before the rash appeared. This proceeding, he believes, lessens the risk of pulmonary complication assuming a serious form.—*New York Medical Journal*.

THE THYROID TREATMENT OF GOITRE.—P. Bruns (*Beitr. z. Klin. Chir.*, No. 2, p. 521). The author had thus far over three hundred and fifty cases under thyroid treatment, and is able to draw the following conclusions from his observations: A large majority of goitre cases are amenable to the thyroid treatment; only one fourth of the cases remain unaffected. The more recent the case the more favorable the result. A compact goitre can be reduced to only a few nodules. The simple hyperplastic form is the only one favorable for this treatment. In more than three fourths of the cases after ceasing the treatment the goitre will grow again. It is very likely that the action is due to iodine contained in the thyroid.

The results of microscopic examinations of the changes brought on by thyroid treatment are given in detail by Baumgarten.—*American Medico-Surgical Bulletin*.

ANTIVENIN.—Dr. Fraser, of Edinburgh, has attempted to render animals immune to the bite of serpents by making injections of one tenth the fatal dose and gradually increasing the quantity of venom. The serum of animals thus immunized is antitoxic and is named antivenin. In case of

poisoning by serpent bite, he says, first shut off the circulation as much as possible by ligature; increase the size of the open wound; suck out with the mouth or, better still, with an aspirating pump; inject antivenin into and about the wound beneath the skin, and do not remove the ligature for at least half an hour. To save a man's life three hundred and thirty cubic centimeters of antivenin are required, provided it can be injected within half an hour of the accident. The treatment has as yet, so far as we know, not been tried on man.—*Medical Record.*

ARGONIN IN THE ACUTE STAGES OF GONORRHEA.—A Preliminary Report. In the August issue of the *Journal of Cutaneous and Genito-Urinary Diseases*, Dr. Geo. K. Swinburne, of New York, relates his clinical experience with Argonin in the treatment of fifty-one cases of acute gonorrhea observed in his service at the Good Samaritan Dispensary. This drug is a combination of silver with casein, and is a white powder which, carefully heated with water over a water bath, forms an opalescent, viscid, albuminous fluid. The maximum strength of this solution is ten per cent; the reaction is neutral. Of the powder, fifteen parts contain as much silver as one part of silver nitrate. A peculiarity of this compound is that the silver is not precipitated by the addition of sodium chloride, nor is the compound decomposed by contact with albuminous substances. According to Jadassohn it possesses powerful germicidal properties; it is not irritating to the mucous membrane of the urethra even in the concentrated solution, nor is it escharotic; it possesses, however, no astringent properties.—*Maryland Medical Journal.*

A NOTABLE CONTRIBUTION TO LITERATURE.—Dr. Dr. Thomas A. Stedman, of New York, whose Medical writings are well and favorably known, has lately shed additional luster on the medical profession by writing a non-medical book, a text-book for students of the modern Greek language, published by Messrs. Harper & Brothers. "Modern Greek Mastery," as the book is entitled, has not, as the unthinking might suppose without looking at the subsidiary title, "A Short Road to Ancient Greek," been written to further the political purpose of establishing the power of Greece over any other nation, but simply to aid the student in acquiring a mastery of modern Greek. We have looked it over only superficially as yet, but enough to satisfy ourselves that it is an excellent text-book.—*New York Medical Journal.*

HIS MESSAGE.—The long, gloomy operating-room of the hospital is hushed and still; soft-voiced, gentle-eyed nurses move quickly here and there, and a skillful attendant arranges the cruel-looking instruments upon a table. Before administering chloroform to the patient, prior to the amputation, the kindly doctor leans over and asks him if he has any message for his friends. "Naw!" he murmurs wearily; "jest tell 'em dat you saw me, an' dat I'm losin' flesh."—*Sun.*

THE SERUM TREATMENT OF THE PLAGUE.—According to the information received by the French Colonial Minister, says the *Allgemeine Wiener Medizinal-Zeitung* (cited in the *Deutsche Medizinal-Zeitung* for October 5th), Dr. Yersin, the discoverer of the plague bacillus, has established a bacteriological laboratory in Uha-Trang, on the coast of Annam, for the study of the serum treatment of the plague, and has taken the opportunity afforded by this year's outbreak of the disease in and about Hong Kong to make a practical test of the efficiency of serum obtained from horses. The account is that he has employed the treatment in twenty-five cases of bubonic plague, twenty-three of which have been cured.—*New York Medical Journal*.

HOW BEST TO MAKE SOCIETY MEETINGS OF PERSONAL VALUE.—Do not try to hear all the papers. Pick out those you are most interested in. Listen to them intently. Come forward where you can hear. Argue with yourself as to the statements made. Discuss points that you want light upon. Refute statements with which you disagree. Do not allow your neighbor to talk to you while you are listening to a paper. If your power of attention lags, get a good breath of fresh air.—*Col. Med. Journal*.

AN APPLICATION FOR VARICOSE ULCERS.—Simonelli (*Semaine Médicale; Wiener klinische Rundschau*, October 11, 1896.) recommends this powder:

R Sodium chloride,	10 parts;
Menthol,	1 part.

After cleansing of the ulcer this is to be dusted on. Under this treatment even perfectly atonic ulcers soon begin to granulate healthily, and then they may be treated with cauterization, skin-grafting, etc.—*New York Medical Journal*.

A NEW TRAUMATICIN.—According to the *Revue Internationale de Médecine et de Chirurgie* for September 25th a form of traumaticin that is used in the dermatological clinic in Berne is made by Ducommun's method; that is, by mixing a watery solution of soap with a solution of alum. A magma consisting of a compound of aluminum and fatty acids is formed. The excess of water is squeezed out of this mass with the fingers, and the residue while still moist is dissolved in ether.—*New York Medical Journal*.

DIPHTHERIA SPREAD BY RABBITS.—A report comes from Webster City, Iowa, that an epidemic of diphtheria has been spread by rabbits in that neighborhood. The disease is said to have recurred annually in a school-house in which the rabbits hibernated and whence the disease was disseminated. The wise decision was reached to destroy the building by fire.—*Medical Record*.

SUICIDE IN EUROPE.—From recent statistics it appears that 25,000 people commit suicide in Europe each year. In Paris alone the number last year was 8,226.

RUPTURE OF THE URETHRA DURING COITUS.—Dr. H. Ganz (*Prager Medicinische Wochenschrift*, 1896, No. 26; *Centralblatt für Chirurgie*, September 19, 1896,) relates the case of a man who was attacked during coitus with a severe pain in the region of the neck of the glans penis and a considerable hemorrhage from the urethra. He found the penis quite tender, but neither swollen nor ecchymotic; so it is doubtful if the injury extended beyond the mucous membrane.—*New York Medical Journal*.

AN APPLICATION FOR FURUNCLES OF THE EYELID.—Landolt and Gigax are credited in the *Wiener Klinische Rundschau* with the following formula, intended for use in stubborn cases:

℞	Tincture of camphor,	} of each	15 grains;
	Precipitated sulphur,		
	Lime-water,	} of each	150 grains;
	Rosewater,		
Gum arabic,	3 grains.		

AN ARGUMENT AGAINST PESSIMISM.—Mr. Wilfred Ward, in an account of conversations with Huxley contributed to the *Nineteenth Century*, quotes him as having said: "One thing which weighs me against pessimism and tells for a benevolent Author of the universe is my enjoyment of scenery and music. I do not see how they can have helped in the struggle for existence. They are gratuitous gifts."

A LOTION FOR THE ITCHING OF URTICARIA.—The *Provence Médicale* for October 3d gives this formula "as for the rich":

R	Distilled water,	450 parts;
	Cherry-laurel water,	50 parts;
	Chloral (hydrate?),	5 parts;
	Cocaine hydrochloride,	3 parts.

IN RUSSIA there are 18,334 physicians, or 1 to about every 6,000 inhabitants, while in Germany there is 1 to each 3,000, in France 1 to 1,800, and in England 1 to 1,600. In America they have not been accurately counted of late, but there is a strong belief among New York physicians just now that the proportion must be somewhere in the neighborhood of 1 to 16. *Medical Record*.

THE MIGNONETTE AS A VERMIFUGE.—The *Journal de Médecine de Paris* for October 4th states that in Russia the mignonette (*Reseda luteola*) has long been held in great popular esteem as a remedy against tapeworm, and tells of a woman who, fasting, took a very strong decoction of the flowers and then a large dose of castor oil, and three hours afterward voided the tapeworm in the form of a ball.—*New York Medical Journal*.

A SCAREMOSQUITO.—A New Jersey man has applied the principle of the scarecrow to that other rapacious bird, the native mosquito. He suspends two or three imitation dragon flies by a fine cord from the ceiling of his room, and claims that no mosquito will remain within sight of them. *Medical Record*.

Special Notices.

A. O. STIMPSON, M. D., C. M., Thompson, Pa., says: I have used and prescribed CELERINA as a nervous sedative in a sufficient number of cases to test its medical virtues, and by experience I find that it is the most effective anodyne compound that is made. It is especially adapted to such cases as will not tolerate opiates, especially in neurasthenia and hysteric convulsions. I have also used it as a calmative in several cases of insomnia, brought on by over indulgence in the use of alcoholic stimulants. I have often combined it with Peacock's Bromides very effectually. Miss A. C., a young lady, inheriting an extremely nervous temperament from her mother, was treated by me three months ago for amenorrhea and chlorosis. Preparations of iron were prescribed for her with decided benefit as a constitutional treatment, but she could get no rest at night, only when completely exhausted. Opiates of various kinds proved more of an excitant remedy than calmative. By the frequent and repeated use of bromides of potash, soda, and ammonia, she would obtain rest when her stomach would tolerate the remedies, but CELERINA proved to be the *sine qua non* in her case; the second dose scarcely ever failing to procure a protracted and refreshing sleep. Case 2. Mr. F. L., a professional house painter, occasionally afflicted with colica pictonum, immediately relieved of pain and trembling by repeated doses of CELERINA given in milk. Case 3. Mrs. J. G., an aged lady, suffering from hemiplegia, attended with annoying formication in palsied limbs, was relieved of these disagreeable symptoms and of insomnia by the use of CELERINA. Opiates of any kind failed to have any beneficial effect, and the bromides and preparations of valerian disagreed with her stomach. Case 4. Mr. S. S., an habitual toper, had had no sleep for three nights in succession, where the stomach was in such a condition that it refused to tolerate alcoholic stimulants in any shape, was speedily relieved by the use of CELERINA. Case 5. A. C., a young child, two years old, suffering from hydrocephalus, was greatly benefited by the use of CELERINA as a nervine sedative, and is in a fair way to gain unlooked-for health.

S. L. REED, M. D., Highland Park, Ky., October 28, 1896, writes: Have only time at present to copy notes in reference to case in which I used Bromidia. Was called suddenly early one morning, June 10th, to see Mrs. McG. Patient had been under treatment of Dr. R., who had been called but failed to answer. Found patient suffering with acute mania, very violent and destructive. On questioning family found patient had delivered herself four days previous of a three months' fetus. Since that time patient had been receiving enormous doses of morphine with no apparent result. As patient was beyond control, improvised a straight-jacket of her husband's sweater and bicycle belt. Ordered half ounce Bromidia (Battle & Co.) every half hour until quiet. In two hours patient was sleeping. Patient continued to receive Bromidia whenever indicated, along with other treatment, and in a few weeks was apparently well, although Dr. R. still has her under observation. This will show the superiority of Bromidia over morphine, especially in cases with head symptoms.

I have had moderate success with Iodia, but could sing the praises of Papine in several columns if I had the time.

SANMETTO IN AFFECTIONS OF THE GENITO-URINARY TRACT.—Dr. Robert Park, M. D., L. F. P. S., Glasg., L. S. A., M. R. C. V. S., etc., 288 Argyle Street, Glasgow, Scotland, says: "I find in Sanmetto an extremely elegant preparation, and one very effectual in remedying those medical affections of the genito-urinary tract for which it is especially designed. I was particularly pleased with its successful action in a case of irritation of the bladder neck, and frequent micturition and incontinence in a young adolescent female."

THE AMERICAN PRACTITIONER AND NEWS

"*NEC TENUI PENNĀ.*"

VOL. XXII. LOUISVILLE, KY., DECEMBER 12, 1896.

NO. 12.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—*RUSKIN.*

Original Articles.

BIOLOGY AND THE DUALITY OF MAN.*

BY T. B. GREENLEY, M. D.

[CONTINUED FROM PAGE 416.]

We have asked and tried to answer the question, What is life? and now we come to another problem in the interest of man, which apparently is more puzzling than that of life. I allude to what we understand to be the "soul." There are some few people in the world who deny the existence of such an entity and claim that death ends all. But the question is asked, What is the soul? Webster defines it to be "The spiritual, rational, and immortal substance in man which distinguishes him from brutes; that part of man which enables him to think and reason, and which renders him a subject of moral government."

Locke says: "By the soul and its correlative words in other languages has been understood, generally, as a spirit while animating a human body, and, by spirit, the same soul as it is after that body's dissolution."

"Cicero and Virgil regarded the soul as a subtle matter which might come under the name *aura*, or *ignis*, or *ether*, and this soul they both called *spiritus*."

"Descartes was the first philosopher who introduced the absolute and essential heterogeneity of the soul as intelligence and the body as matter."

* The third annual lecture pertaining to man, delivered publicly at Elizabethtown, Ky., under auspices of the Hardin County Medical Society.

"Swedenborg claims that man is an organism fitted by an earth body to live in this world, and by a spirit body to live simultaneously in the spirit world, and by continual influx from the divine creative source."

"All these high and subtle questions do not affect the one dominant proof of man's continued existence. There are phenomena in abundance which, if they do not enlighten us as to the nature of matter in itself, at least show that matter has its master in what we are obliged, in the poverty of language, to distinguish by the name of spirit."

"No proof of the soul's immortality," says Papillon, "is so strong as that we draw from the necessary simplicity and eternity of all the principles of force. Nothing bears witness so powerfully to the majestic reality of a God as the spectacle of those diversities, all harmonious, which rule the infinite range of forces and bind in unity the ordered pulse of the world."

"If there is no life beyond the present," says Edward Laboulaye, "then is this one a lie and a mockery. Immortality is something more than a recompense; it is the fulfillment, the justification of life."

"We must be immortal," says Berthold Auerbach, "or it were a cruelty to let us men alone know that we must die. The moth does not know that he must die; he thinks the burning light is a gay and brilliant flower, and he dies in the flowery flame."

"We who love life fear most the mystic death,
Yet we in death the selfsame life shall live—
This very life we know—but glorified;
And the fair temple which holds our breath
Shall simply take the glory seraphs give—
Renew its joys, and say, 'I have not died!'"

As far as we have any knowledge, Egypt was the first nation that declared the soul to be immortal. All nations or peoples whom we have any account of, both civilized or barbarian, believe in the immortality of the soul and worship some kind of deity. In this particular we are distinguished from inferior animals. Man is termed a religious animal.

The question might be asked, Can the existence of the soul be demonstrated? The answer must be, as far as tangibility to the senses is concerned, in the negative. But its manifestations through the gray matter or cortex of the brain, in the various attributes of what we term mind, should be satisfactory evidence of its existence.

The mental difference between man and the inferior animals is, the former possesses intelligence, whereas the latter possess instinct only.

The new-born infant, although possessing the largest brain of all animals at birth, yet is the most helpless, and depends entirely on its parents for nourishment and tuition, while most young animals by instinct find their food as soon as born. This shows the functions of the soul or mind in the infant are almost dormant until the faculties are aroused by tuition. Although it is so helpless and so unconscious of its surroundings, its brain capacity for the acquisition of knowledge is indefinite.

The action of the bioplasts in weaving the various tissues of the body has constructed several sets of nerves—the motor, the sensory, the trophic, and the sympathetic. These various sets of nerves are so arranged as to connect with each other through the brain and various plexuses. The brain, being a large nervous mass, is called the central organ of the nervous system. The cerebrum, or large brain, is the seat of all intellectual faculties, and these have their special localizations in that organ, except the will power, which is general.

When we speak of intelligence we embrace in the expression the various attributes of the mind. The nervous system then may be said to be divided into two grand parts or divisions, the brain being the central or influential part, and the remainder of the system the automatic part; or, if you please, the intellectual and instinctive portions. Some biologists designate these portions of the nervous system as the influential and automatic arcs. These two different parts may act separately or in conjunction with each other. We may be asleep and some one will prick the sole of our foot, when instinctively the foot will be drawn away from the point of danger, the brain, or intellectual part, remaining dormant.

Again, the somnambulist may be moping around unconsciously, the central or influential part being asleep or dormant.

Again, if we deprive a frog, a fish, or a bird of the cerebral hemispheres, it only acts automatically and without judgment. If you put the frog in water he will swim till he strikes the shore, where he will remain and starve to death if not fed. The fish will remain in the water, but swims at random and will not seek for food. The bird, if thrown into the air, will fly until it perches on something, where it remains. Then, as said before, these divisions of the nervous system may act in concert, or, if you please, the automatic arc may act in response to the influential arc.

Dr. Carpenter designates these divisions as the volitional and responsive arcs, and it seems to be well adapted to them when they act

together, but I think Dr. Cook's terms, influential and automatic, better when the latter act independent of the former. It is a matter of every-day occurrence that the two act in concert. Every time we perform any locomotive action, when awake and conscious, the motor nerves obey volition. If at any time our senses inform us of the presence or approach of danger, the automatic arc of nerves is thrown into action by the will through the influential arc so as to escape from injury.

Numberless instances of this double action might be enumerated, but it is unnecessary to the thinking mind. There is one condition of the nervous system that might be named, wherein the influential arc may act independently of the automatic under peculiar circumstances. I allude to the state of sleep. We may, while in this condition, dream of being at certain places, or seeing certain persons, and traveling long distances, and many other things, and when we wake up the impressions of what we have seen in our sleep are just as vivid to the mind as if the whole panorama was a fact and had actually taken place. Now these dreams must be the result of action of the influential arc, and of course independent of the automatic arc. But as to this independent and separate action of the cerebrum we have many and every-day examples. All thought or occupation of the mind in a state of muscular quiescence constitutes independent brain action.

But the great question among biologists is the character of the force which produces the various phenomena of the mind. Some materialists pretend to believe that the molecular structure of the brain cells possesses inherent power of motion and elaborate will power, thought, with all the faculties of the mind. Others claim that all these phenomena are produced by chemical or physical force. But it is now thought by the ablest physiologists and biologists that this is an immaterial force called the soul, and acts outside of the brain substance. If it can be demonstrated that the cerebral lobes will not develop any phenomena by the application of electricity or physical force, it should determine the matter in the negative. It is a well-known fact that if electricity is brought into contact with any motor nerve or muscle there is immediate action. Not so when brought into contact with the lobes of the cerebrum. Not only are no mental phenomena produced, but not even the least cellular action ensues. But we must adhere to the well-established axiom that we can not have an effect without an

fore molecular mechanism must be eliminated as a cause of action. It is not possible to demonstrate positively the presence and directive force of the soul over the brain cells, but if we judge of the results we know that no material force is adequate to produce them.

"Intellectual and moral qualities of man can not be brought under the law of conservation of energy without acknowledging a metaphysical principle in close contact with matter and energy."

"In nerves and muscles of a dead body there is no disengagement of electricity and mechanical force."

Differentiation of tissue as well as of organs causes their independence to yield to a central power, with the result of a more distinct individuality of the organism as a whole. But dependence of tissue and organs and the more marked individuality of the whole organism makes a shifting from variety to a new species difficult and impossible. Virchow says: "Darwinism has no room in pathologic anatomy of man."

The soul is the immaterial part of ourselves. It is our ego or personality that makes us conscious of our identity and existence. It elaborates through the brain cells all the phenomena of the mind. Through consciousness it controls our will power and directs our virtuous and moral attributes. It enables us to say that we know that we know and think that we think. Although our whole system undergoes complete metamorphosis at short periods from birth to death, yet our personality or identity is never changed. This characteristic of identity pertains to man only among all animal or vegetable creation. Millions of men may be examined, and there will be some peculiarity belonging to each individual by which he may be identified. If nature stamps him with any special mark during embryonic life it is retained, notwithstanding the many tissue changes he is subject to during his existence.

But the question still presents itself, however, in a weak way: Can any force aside from spiritual force, acting as a cause, produce thought, will power, consciousness? If this is answered in the affirmative, we should be forced to say that the effect is greater than the cause, which would destroy axiomatic science. We might ask, Can physical or chemical force produce the intellect possessed by such a philosopher as Democritus, as Anaxagoras, as Aristotle, as Socrates, as Bacon, as Locke, as Hume, as Kant, as Berkeley; or such a military genius as Alexander, as Cæsar, as Marlborough, as Wellington, as Napoleon, as

Washington, as Lee, as Jackson, as Taylor, as Grant; or such statesmen and orators as Demosthenes, as Cicero, as Burke, as Fox, as Pitt, as Gladstone, or as either of our great triumvirate, Clay, Webster, or Calhoun; or such naturalists as Pliny, as Humboldt, as Cuvier, as Agassiz, as Huxley, as Darwin, as Tyndall, as Audubon, as Bonpland, as Linnæus; or could they elaborate such mental power as possessed by the scientific discoverers, as Copernicus, as Galileo, as Newton, as Morse, as Fulton, as Fitch, as Hippocrates, as Galen, as Jenner, as Pasteur, as Edison? Can they produce such poetical intellects as possessed by a Homer, a Shakespeare, a Johnson, a Cowper, a Chaucer, a a Spencer, a Byron, a Shelley, a Scott, a Goethe? We might name many more great men who have adorned the world's history with their genius in the various departments of literature, arts, and science, as musicians, painters, sculptors, tragedians, comedians, as well as pulpit orators, doctors, etc., but we have indicated a sufficient number to show the fallacy and even impossibility of any force aside from spiritual to produce such wonderful effects.

Memory is one of the most wonderful and important attributes of the mind. In this particular the mind may be regarded as a tablet upon which impressions and events may be registered. How vividly are occurrences of childhood frequently aroused in our memory, even in old age! This registration on the tablet of memory commences at a very early period in our history. If our parents ever punished us for our misbehavior we never forget it. The associations and friendships formed at school are never forgotten, and are as well remembered three score years after as if they had recently occurred. The images of our dear ones are photographed on this tablet so permanently that they remain with us to the last moment of our lives, and no doubt will remain with us during the long ages of eternity. It is a happy thought to believe we shall be able to identify each other after death.

Besides our transactions and intercourse with others, our individual conduct is also registered on that same tablet, and if we have accomplished good in the world it is pleasant to remember it; but, on the other hand, if we have been guilty of bad conduct, even if only known to ourselves, it is remembered with regret and wounds our conscience, and therefore should caution us to do better in the future. This permanent registration of events is wonderful when we come to think that the brain cells have been changed and renewed many times during our lives.

Then we have association of ideas. I mean by this that one thing reminds us of another. If we see a cloud arising it connects itself with rain. If we meet a friend we naturally think of his family. If we smell smoke we feel that fire is close by. In this way many things are brought to our minds. In fact, it is a good way of memorizing things. Many times when we think of the name of a country we can recall the name of its capital, and *vice versa*. The same thing frequently occurs in the memory of names of individuals; if we can think of the given name it reminds us of the surname.

Consciousness is one of the highest attributes of the soul and belongs to man only. It forms one of the greatest elements of metaphysics. By it we know that we exist and are made familiar with our natures and surroundings. In the beginning of the last century Bishop Berkeley published his treatise, "Concerning Human Knowledge," in which he claims that consciousness is confined to the microcosm, or little world as it pertains to man, in contradistinction to macrocosm, the big world or universe. In other words, he claimed that it only applied to us subjectively, and nothing objectively; that the only knowledge we obtain of the outer world is through the various senses. This doctrine was contested by Hume, and finally modified by Reid and Hamilton, so that we are now permitted to apply consciousness to both the little and big world.

The affection or love between human beings is one of the most pleasing attributes of the mind. There is nothing more beautiful than to witness kindness and love existing among the members of a family, and it makes old people feel happy in their last days to know that they will be loved and commemorated after they depart this life. If we had no dear ones to remember us kindly after we are gone we could not die happily.

Sympathy of mind with mind is another evidence that it is not the result of physical or mechanical force. We frequently witness the effect of an orator on his audience. The influence many times is so great that one moment they may be in tears, the next in a mirthful mood, or he may work on their passions to such an extent as to excite them to mob violence. There are many instances wherein mind sympathizes with mind, to say nothing of mesmerism, hypnotism, mind-reading, etc.

Then, again, the sympathy between the mind and body in many cases is very palpable. It is frequently illustrated in times of fatal

epidemic diseases, when people become so alarmed as to virtually surrender to the disease and die in a few hours from the time of attack. This has happened in many cases in time of cholera. You might say they were scared to death.

Then we know that by the inspiration of hope through the assurance of the physician many cases are saved.

We also are familiar with the fact that the body may be so shocked through the mind that the loss of life may ensue.

It is common in speaking of persons who are insane to say they are mentally affected or diseased. But it would seem to be a stretch of language to say the mind or soul is diseased. Of course all the phenomena or manifestations of the mind are made through the cellular structure of the brain, and if this organ, or any part of it, becomes pathologically affected the action of the mind to that extent is disturbed or destroyed. Hence we observe various phases of insanity, from simple melancholia to complete dementia, as in paresis of the organ. A small portion only of the cortex may be diseased so as to cause a species of monomania, and the functions of the mind will be naturally exercised when the diseased part is kept quiet.

The brain may be so shocked through the senses that for a time the mind is partially, or may be entirely, dethroned. But, as a rule, if the shock is not so great as to destroy life the brain, with proper care, will recover its equilibrium and the mind resume its natural functions.

Emotions imply several mental manifestations, as fear, joy, grief, anger, etc., which are usually discernible in the expressions of the face by muscular action, as well as the peculiar change in the appearance of the eyes.

By a survey of the face under the influence of any of these emotions we naturally infer its character. If fear exists the countenance has a distressed and forlorn appearance, generally with shedding of tears; if joy, a happy and delighted expression of face and pleasant aspect of the eyes; while if anger supervenes we have a contortion of facial muscles with flashing eyes, perhaps accompanied with muscular movements of the body. If under the influence of the emotion of love, especially if reciprocated, we perhaps have the most happy and satisfied appearance of all the emotions. The emotions of the soul are so varied it is a hard matter to enumerate and describe them all.

I will only allude to the special senses as a further argument against the idea that their functions could possibly be the result of any force aside from that of mental or spiritual.

Physiologists have for ages regarded the special senses to consist of only five, to wit: sight, hearing, feeling, taste, and smell; but in recent times some have added another, that of muscular sense or sense of weight. We might, for that matter, add several more, such as sense of well-being, of hunger, of thirst, of heat, of cold, etc.; but these are all emotional in character, and not confined to any special nerves, as the old-time five senses are. These have only one nerve to each organ, except that of touch.

These five senses, together with the muscular sense, might be termed intellectual senses, while the others alluded to should properly be termed emotional. Some writers claim that there are only three intellectual senses, to wit: seeing, hearing, and feeling. But we certainly obtain knowledge from tasting and smelling as well as lifting. The knowledge thus obtained might be termed objective, while the emotional senses are subjective.

Speaking of the separate senses, it is very evident that the sense of vision is the most important, both as it regards our comfort and enjoyment and the acquisition of knowledge.

The five senses—sight, hearing, touch, taste, and smell—are very essential to our welfare and happiness. They are calculated to afford us pleasure, and also to warn us of danger. Sight gives us pleasure by observing a panorama of the beauties of the external world, and at the same time may warn us of the approach of danger. Hearing may gladden the heart as through attendance upon a musicale, or by the relation of good news, as well as warn us of danger through certain unpleasant sounds. Taste and smell both can afford us pleasure by the approach of good victuals and the aroma of sweet-smelling things, and they may serve to caution us against danger as well.

It is useless to define the great advantages of these senses to an intelligent people. A moment's thought will cause them to recur to our minds.

The great Webster died believing in the immortality of the soul. Almost his last words were: "That there is a God all must acknowledge. I see him in all those wondrous works."

Among the last words of the philosopher Socrates, spoken to his friends respecting his funeral, he said: "Do not call this poor body Socrates. When I have drunk the poison I shall leave you; I shall go to the joys of the blessed. I would not have you sorrow at my hard lot, or say at the interment, thus we lay out Socrates; or thus we

follow him to the grave and bury him. Be of good cheer. Say that you are burying my body only."

The great Frederick, although not a church communicant, was not an atheist. He said: "It was flatly inconceivable that intellect and moral emotion could have been put into him by an entity that had none of its own."

The great German poet Goethe, in company with his friend Eckerman, the philosopher, was one day soliloquizing on the setting sun, when he remarked: "I am fully convinced that our spirit is a being of a nature quite indestructible, and that its activity continues from eternity to eternity."

"Great truths are portions of the soul of man;
Great souls are portions of eternity;
Each drop of blood that e'er through true heart ran
With lofty message, ran for thee and me;
For God's law since the starry song began
Hath been, and still for evermore must be."

MEADOW LAWN, KY.

PHOSPHATURIA.*

BY J. T. WINDELL, M. D.

The inspection of a large number of specimens of urine, freshly voided, will reveal some that are turbid and lack transparency. This turbidity is due to one or more of four conditions: Phosphaturia, pyuria, bacteriuria or chyluria.

If the urine contains an excess of the earthy phosphates, it is white and turbid, slightly acid, neutral or alkaline in reaction, and is usually of less than the average specific gravity. The precipitate is amorphous, presenting no crystalline forms under the microscope. The turbidity due to this condition disappears at once on the addition of a few drops of an acid; acetic acid preferably to nitric or hydrochloric, because it does not alter the urine for subsequent tests.

This condition of the urine may be due to temporary diminution in the quantity of uric acid produced in the system, to a formation of alkaline carbonates from the use of fruits or vegetables containing salts

turia, as a pathological process, is the secretion at all times of urine that is white and turbid at first and gradually depositing a large quantity of flocculent amorphous sediment, consisting of earthy phosphates. Sometimes this deposit of the phosphates takes place in the bladder, and the patient notices that his urethra is more or less clogged at the commencement of the act of urination, and also that a stream of mucus loaded with phosphates follows after the urine has been voided.

The last is a very troublesome symptom, for, in addition to the pain it sometimes causes, the patient is apt to think it is a flow of semen or prostatic fluid, and if he be a young man his mind is filled with thoughts of sexual weakness, loss of manhood, or prostaticorrhea. If there be any pathological impediment to the passage of urine, such as stricture, enlarged prostate, or a neoplasm at the base of the bladder, phosphatic calculi may follow from a long-continued phosphaturia.

In one instance I have known of as many as fifty stones of different sizes being formed in the bladder of a man with an enlarged prostate. Phosphaturia is generally associated with some depression of vital power, and with it there is generally a waste of nerve, brain, and muscular tissue. The cause of this disease is generally traced to excessive mental strain, physical exertion, loss of sleep, or sexual excesses.

The first case that came under my care was that of a railroad engineer, who had been greatly overworked, making long trips on a fast passenger train, losing sleep, and eating irregularly. He first noticed that the coal in the tender, on which he urinated, turned white as if whitewashed. He voided his urine frequently and in large quantities, lost flesh, became nervous and irritable, could not eat, and was troubled with insomnia. His urine was white, of an alkaline reaction, specific gravity ranged from 1015 to 1022; a heavy white precipitate amounting to almost one fourth the bulk would be rapidly deposited. Rest from work, systematic dieting, and large doses of dilute hydrochloric acid were all that were necessary to effect a cure.

The next case—that of a commercial traveler—was more severe. He was a very large man, weighing two hundred and fifteen pounds. He had syphilis at the age of twenty, for which he was regularly treated by a well-qualified physician, and had a course at Hot Springs, where he was cut for a stricture of the anterior urethra. His mother is still living; his father died two years ago of some disease of the bladder.

the stricture operation. Phosphaturia existed throughout the gonorrhea, which, owing to the constant irritation of the phosphatic sand, was difficult to cure. Thinking that a deranged digestion, or the eating of fruits or vegetables, caused the excess of phosphates in his urine, a milk and meat diet was ordered and faithfully adhered to for two months; during which time dilute hydrochloric acid in fifteen-minim doses after meals, or dilute phosphoric acid in half-dram doses, was administered, with no diminution in the phosphates.

I next attempted to supply the waste of phosphates by the administration of hypophosphite compounds of various combinations, giving strict attention to diet, sleep, and exercise. These failing, benzoate of soda, saccharine, nitro-muriatic acid, strychnia, and a course of mercury and potassium iodide were in turn tried without result.

He had lost about twenty-five pounds in five months, which fact annoyed him very much. He passed large quantities of urine, and on attempting to urinate in the morning his meatus would be clogged with a mass of dried phosphates. A stream of phosphates passed after each urination. He, having occasion to visit New York on business, I advised him to consult a leading genito-urinary specialist, who prescribed bicycle riding, oil of gaultheria, nux vomica, and dilute hydrochloric acid. After two or three months of this treatment, no benefit having resulted, I put him on fifteen-grain doses, three times a day, of urotropin dissolved in mint water. The result was almost magical, he passing on the second day the first clear urine that I had ever seen him void. He has been taking this medicine off and on for about six months, has gained ten or twelve pounds in weight, and has none of the symptoms that attended his former phosphaturia.

LOUISVILLE.

CONGENITAL PTOSIS—THE OPERATION DEvised BY PANAS FOR RELIEF MODIFIED.

BY M. F. COOMES, A. M., M. D.

Professor of Physiology and Diseases of the Eye, Ear, and Throat, in the Kentucky School of Medicine.

The objects of an operation for congenital ptosis aside from its cosmetic effects are more numerous than is apparent at first thought. The most important of all is the preservation of the vision in that eye. Continued non-use of the organ would result in a failure on the part of the retina to respond to the stimulus of light, and this of course would mean blindness to a degree, very much the condition of the inactive eye of a person who has strabismus.

Again, the use of both eyes affords greater protection from the outside world and also gives more satisfactory vision. Congenital ptosis is of rare occurrence and is most usually present on both sides, that is, both lids droop. In most instances where only one eye is affected it is in reality not a congenital defect, for nature has not been at fault, but the paralysis has resulted from an injury to that portion of the third nerve which supplies the levator palpebræ muscle, or to the muscle itself during the passage of the child through the maternal parts into the world. Instrumental delivery not infrequently results in this form of injury—the slipping of the forceps wounding the nerve, muscles, and contiguous parts, resulting in paralysis.

The case appended was a hydrocephalic child, one in which the cranial walls were punctured in order to drain off the fluid and thereby permit a reduction in the size of the child's head so that it could make its way through the maternal parts without injury to the mother or the infant. The delivery was by forceps, and the evidences of injury are plainly to be seen on the forehead and in the region of the brow on the injured side.

The child, a miss of six years, unusually bright and intelligent for one of her age, was brought to me in May, 1895, with the request that I do what I thought best to remedy the defect. The child was anesthetized, and the operation which I performed was much after the fashion of that devised by Panas, which consists in arranging the tissues connected with the upper lid to the occipito-frontalis muscle in such a way as to enable the patient to move the lid with that muscle, that is, to lift the lid up with the occipito-frontalis muscle. I used no silver wire as directed by Panas, but used silk sutures, and removed them all on the third day after the operation. There was no pus formed at any time, not even stitch suppuration, and the child made an uninterrupted recovery.

The amount of correction in all these cases is limited, and the movements are also limited. The full amount of correction that could be obtained was obtained in this case, and really it was overdone to a degree. This, however, should always be attempted, limiting the amount of overcorrection. If the correction is sufficient the child will open its lids wide enough to enable it to have binocular vision out of that eye without throwing its head back so as to get a free field before both

fice to pull the edge of the lid high enough. Furthermore, if the edge of the lid partially obstructs the pupil, the patient will constantly be in a straining position with the occipito-frontalis in order to pull the lid out of the way. This will wrinkle the forehead and always result in attracting undue attention, which is undesirable.



The first of the pictures shows the condition of the lids before the operation. The second, while looking on a horizontal plane ahead of her. The third picture shows the child in an effort to open both eyes alike. I could not be present when the photographs were taken, and the poses are not what I intended they should be in the last two. The second should have represented the child looking at a book, when both eyes appear in their most normal position because the lid of the uninjured eye droops to a point that corresponds almost to the ordinary position of its fellow of the other side. This child has perfect binocular vision for all near points, that is, for all reading, writing, sewing, and desk work, and for all things below the level of her eyes.

LOUISVILLE.

FREQUENT URINATION CURED BY THE BICYCLE.—According to the *Centrablatt für die Krankheiten der Harn und Sexual Organe*, 1896, the polakiuria of young people is seldom associated with disease of the urinary system, the brain, or the spinal cord. Much more frequently it is simply a stigma of neurasthenia. Often all therapeutics are unavailing. It was observed that during bicycle rides the desire to urinate was either entirely wanting or was much less frequent and urgent, and therefore two obstinate cases were ordered to take, twice daily, long bicycles rides; cure resulted in both cases.—*Therapeutic Gazette*.

Reports of Societies.

TRI-STATE MEDICAL SOCIETY OF ALABAMA, GEORGIA, AND TENNESSEE.

Abstract of Papers and Discussions at the Eighth Annual Meeting, held in Chattanooga, Tenn.

The first paper was by Y. L. Abernathy, Hill City, Tenn., entitled "Convulsions in Children Treated with Large Doses of Morphine."

He cited several cases which seemed about to die, but recovered under heroic doses of morphine.

Andrew Boyd had used large doses of morphine in children suffering with cholera infantum as a dernier resort. In convulsions and cholera infantum the cause seems to be entirely reflex and the treatment rational and correct, no matter how heroic it may seem. In one of his cases an infant took 70 drops tr. opii in two and one half hours, and 4 quarter-grain doses morphine in six hours.

J. P. Colvin did not like to advocate large doses of morphine as, if long continued, it would produce convulsions. These cases can be controlled with water by sponge bath or wrapping in blanket, the temperature of patient being an indication of the temperature of the bath. In cholera infantum small doses of mercury should be given.

P. L. Brouillette said large doses of morphine could be borne in these cases. This does not cure, but gives time for other treatment and to find cause.

W. C. Townes thoroughly agreed in giving large doses in these cases. Being self-limited the disease will disappear if patient can be tided over crisis. Doses taught for dangerous drugs are too small for exceptional cases. He had given gr. 1 strychnia with good result; also gr. $\frac{1}{2}$ morphine to children.*

Geo. S. Brown thought it dangerous to allow such claims of the harmlessness of large doses of morphine in children with convulsions

absorbed there may be a great tolerance for morphine because their respective effects on the nervous system are exactly opposites. Let a purgative be given and the poison-breeding material be swept out of the way, and such doses of morphine as recommended in the paper would probably prove fatal.

W. G. Bogart said that this was not the only treatment the doctors gave. He would give an active cathartic, a hot bath, copious injections of hot water *per rectum*, and morphine if convulsions continue in large enough doses to control the spasms.

In closing the discussion Dr. Abernathy said that morphine was the most deadly, damnable, detestable remedy we have; like the vampire, which lulls its victim to sleep while it sucks life blood. He never uses it in children except in these cases, which otherwise would surely die. Other treatment is indicated, nervines, cold applications, if fever, eliminants, etc. The convulsion is only a symptom, but a very dangerous symptom, and if not relieved the patient will die. As causes he mentioned debility, gastro-enteritis, peripheral irritation, rickets, ptomaines, fever, congestion of brain, etc.

D. S. Middleton, Rising Fawn, Ga., read a paper on "Cystitis; Report of Cases;" being a statistical paper, showing its frequency in women; a discussion of the pathology; cause (microbic infection); the treatment by antiseptic injections, and report of cases.

G. A. Baxter would add only one remedy, a saturated solution of acetate of aluminum. Nitrate of silver sometimes produces tenesmus, and he no longer uses it.

Geo. S. Brown commended the style and thoroughness of the paper. The style (or taste) in comprehending the main points without wasting the society's time, and the thoroughness in regard for authorities while still distinct opinions based on the author's close and scientific observation of his own cases were set forth. It was on the line of improvement for any society to have more papers based on these points. Thought it might be of interest to the writer to look up a treatment of cystitis in female recently used by Dr. Clark, of Johns Hopkins. It consisted of the introduction of a thin rubber bag smeared with 20-grain ointment of ichthyol in gelatine. The bag is then inflated and the ointment comes in contact with all parts of the mucous lining. The distension of the bladder probably adds to the benefit from this procedure.

Y. L. Abernathy mentioned as a cause, in the male, stricture of the urethra. If this is cured cystitis will get well.

R. R. Kime, Atlanta, Ga., read "Some Obstetrical Complications, with Report of Cases."

1. Unicervical septus uterus with abortion from right side; fetal structure retained and infected; removed; then uterus, right side, disinfected. Right side three and one half inches in depth, left (non-gravid) one and three quarter inches.

2. Uterine hemorrhage eight days after labor, due to typhoid fever; had to be tamponed three weeks, changing every one to three days. The tampon had to be used and changed rapidly to prevent bleeding to death.

3. Placenta previa centralis with infection before delivery. Had been bleeding four or five days before seen. Immediate delivery by carrying hand up into uterus and performing podalic version. Peeled off placenta, irrigated uterus, and dressed antiseptically. Symptoms of infection returned with renewed vigor, with severe pain, and elevated temperature, which the physician in charge had not been able to control with morphia and phenacetin. Immediately administered salines, irrigated, disinfected, and drained uterus. Patient comparatively easy in a few hours. No more opiates or coal-tar derivatives given. Drainage kept up six days and discontinued, as pulse and temperature became normal.

4. Tumor and infection complicating labor. Infection treated by irrigation and tubular drainage. Tumor completely absorbed. No evidence of it a year later.

5. Extreme toxic intoxication, seen ten days after labor; established utility of tubular drainage beyond doubt, as when tube removed constitutional symptoms returned; controlled by reinserting tube three times. Gauze failed to meet indications. Gauze tampon and curetting in septic infection condemned.

W. G. Bogart indorsed position of writer. He said "the first case was one often met with, and we fail to appreciate the importance of thorough drainage and antisepsis. The removal of all foreign matter and a thorough washing out of the uterus with a hot antiseptic fluid and free drainage will generally result in recovery. Case 2 is one of rare occurrence, hemorrhage eight days after delivery. I call especial attention to the manner in which hemorrhage was controlled—packing with iodoform gauze and keeping it so until hemorrhage ceased. The gauze also acted as a drain for the light fluid. I shall add that I would flush the cavity with hot antiseptic solution. Case 3 is one of great

danger, which demands knowledge, skill, and prompt action. I heartily commend the doctor for his manner of controlling the fever by antiseptics rather than by antipyretics, followed by free drainage. I agree that tubular drainage is the only method of accomplishing the desired result, and will almost invariably bring down the temperature. I condemn the use of antipyretics, especially the coal-tar derivatives. Cleanliness, drainage, alcoholic stimulants, and quinine I believe to be the rational treatment of these cases."

In closing the discussion Dr. Kime said: "In answer I would say that very hot water was used to check hemorrhage in Case 2; also very hot solutions of iodine, of alum, of boric acid, but all failed. In ordinary cases hot water or iodine solutions will check hemorrhage. As suggested, saline solutions can be used to advantage in these cases sometimes. I wish to emphasize drainage most, and condemn the gauze tampon especially in septic cases. Gauze tampons do not drain, but interfere with nature's method of drainage and elimination. The curette should also be condemned in septic cases, as it breaks down nature's barrier and opens up new avenues for absorption, and favors that absorption by holding the debris, germs, etc., in contact with the absorbing surface. Nature, after normal labor, establishes a discharge, the lochia, which is a process of elimination and should be imitated. This can only be done by tubular drainage. The ideal is to carry a strip of gauze up with the tube so as to have both tubular and capillary drainage, which will be effectual in any case, even in retroversion by changing the position of the patient. Where the uterus is curetted, disinfected, and tamponed, and yet the patient dies, it might be said to be the result of the treatment. I wish to emphasize that drainage and elimination are essential and far better than opiates and coal-tar derivatives for pain and high temperature."

W. C. Bilbro, Murfreesboro, Tenn., reported "A Case of Bradycardia" from ptomaine poisoning. The history was one of indigestion. The pulse was 30 standing, after walking two blocks, and was down to 18 at times. At times the pulse was 6, but regular. He laid stress on the apex beat. Improvement under arsenic, strychnia, etc. He divided bradycardia into two classes, physiological, as a constitutional peculiarity, and pathological, as from exhaustion and in stomach affections.

J. R. Rathmell would add to the classes above the neurotic cases. Physiological is probably a misnomer, as diseased conditions have been found *post-mortem*. Sympathetic bradycardia is quite common.

R. R. Kime related a case where the pulse was 36. Listening to the heart the beats were 72, every other beat only being felt at the wrist.

Dr. Bilbro said that he had called attention to the importance of counting the apex beat rather than the pulse at the wrist.

J. R. Rathmell read a paper on "Scarlatina," and laid stress on the complications which are the cause of death and to which treatment should be directed. The contagion resides in the epidermal scales thrown off during desquamation, hence the necessity of isolation, especially during desquamation, also the need of destroying the almost imperishable germs hidden in the room by fumigation, by boiling, and even by burning all articles of clothing, bedding, etc., and a thorough renovation of walls and woodwork with calcimine and paint in order to prevent a future outbreak.

Y. L. Abernathy related cases illustrating the vitality and the latency of the contagion.

G. W. Drake said the diagnosis of the atypical cases was of more importance to the public than the treatment. On the mountain he had encountered a case where there had been none in the history of the place, and the contagion could not be accounted for. There were three other cases, none of which could be traced to the first. The origin could not be accounted for.

G. W. Mills gave an account of an epidemic the origin of which could not be traced.

Dr. Rathmell closed by saying that there was such a relation between diphtheria and scarlatina that when we had one we were very likely to have the other. He did not believe them to be the same.

G. A. Baxter, Chattanooga, described "A New Splint for Fractures of the Humerus Below the Surgical Neck," and demonstrated it on a subject. It consists of a blunt wedge of tin for the axillary space, to which is attached a right angle splint for the arm, which is adjustable on the humeral portion, allowing extension to be made and fixation before bandaging. The axilla is made the point of counter-extension, extension from elbow. It allows examination in case of compound fractures without disturbing extension.

D. S. Middleton related a case treated with plaster of paris applied while swollen; when this disappeared there was overlapping. This seemed more satisfactory.

In closing Dr. Baxter said that statistics showed as much as thirty-three per cent were ununited, and this splint was invented to meet the

indications as found in his own cases. Fixation can not be from the shoulder, it must be from a fixed point. There will be no complaint from numbness of the fingers or pressure in the axilla. Any tinner can make the splint.

C. R. Achison, Nashville, Tenn., read a paper, "Treatment of Cancer of the Skin," advocating the use of caustics in epithelioma. There is less destruction of the tissue than with the knife. When the latter is used, if there are any cells left there will be a recurrence, while, if the caustic is used, the inflammation, etc., will cause the death of the pathologic cells beyond the point cauterized. Pain can be reduced to a minimum by mixing with cocaine or general anesthesia. Arsenious acid has a selective action, devitalizing the cancer cells. Caustic potash is specially useful on the lip. Chloride of zinc produces a dry slough.

P. L. Brouillette asked if any present had ever had arsenical poisoning from the caustic. In one case he had applied the acid over too large a surface and had poisoning. The pain was relieved with morphia, but the result was happy. On the nose he had used the cautery, which answers every purpose.

G. A. Baxter said that the argument of the surgeon was that by the knife the patient escaped the pain, which in some cases was excruciating. He would use the paste in proper cases, but believed the knife generally the best; shortens the time, gives physiological regeneration instead of suppurative results, and is equally efficient in elimination of diseased products.

Frank Trester Smith called attention to a paper read before the American Medical Association and found in the Journal of October 3d, in which he had advocated the use of caustics in epithelioma of the lids, and related a case.

W. C. Bilbro thought the doctor pretty well covered the case, as he advocated the knife first for deep-seated cancers, and, if refused, then the caustic.

J. B. Murfree thought caustics preferable in superficial epithelial cancers. In Dr. Brouillette's case the poisoning was due to too weak a paste. There should be one part acid to one of gum arabic, or it might be stronger, so as to destroy the tissue and not irritate.

Dr. Brouillette said that he had used one part of gum arabic to two of arsenious acid.

Dr. Achison said in closing that he would be more cautious. He had looked up the literature and had inquired from many, and had never

heard of a case of poisoning. In cancer of the breast it was not scientific to use caustics, but if the knife was refused we should cauterize and not allow the case to go to some quack.

W. Frank Glenn, Nashville, Tenn., read a paper: "Diseases of the Veru Montanum (Caput Gallinaginis)." He described acute and chronic inflammation, hypertrophy, hyperesthesia. Cause, gonorrhea and masturbation, hyperesthesia especially due to latter. Symptoms: Frequent desire to urinate, with dribbling at end of act; dribbling urine. Chronic inflammation most frequent cause of impotence. Internally he recommended alkalithia or maizo-lithium; locally, argonin. Nitrate of silver should be avoided in acute cases. Recovery slow. General tonics, galvanism, etc., will cure hypertrophies. In hyperesthesia there is premature ejaculation in the sexual act. The mistake here made is that the case is often treated for sexual weakness with strychnia, phosphorus, etc., while the opposite course is indicated.

C. R. Achison believed conditions of the veru montanum were the cause of the difficulty in treating genito-urinary diseases. A chronic inflammation is the cause of obstinate chronic gonorrheas. Gleet is thus produced. In hyperesthesia premature ejaculations, seminal emissions, the stimulating treatment is contra-indicated, and the doctor has given the classic treatment, the cold current, and sexual sedation.

G. W. Drake asked how the disease caused premature ejaculation.

Dr. Glenn said the veru montanum was the vital part of the sexual apparatus, and the peripheral irritation caused ejaculation just as an eye winks from a foreign body. His former treatment by strychnia caused the patient to get worse, but the present treatment by sedation with cold water was successful. Argonin, five per cent, was preferable to silver nitrate, as it was painless. These are the cases which have gonorrhea twenty times and are cured by the favorite prescription which every man has and which he gives to a friend who has a true gonorrhea, and which has no more effect than cold water.

Geo. S. Brown, Birmingham, Ala., read a paper entitled "The Bacteriology of Peritoneal Drainage." The emphasis lay on the bad principle of introducing drains after abdominal operations on account of a fear of infection, say, from an outpouring of pus from a ruptured tube. The peritoneum has a great power destructive both to germs and their toxins when its integrity is not harmed. A drain is a good thing where there are infected surfaces or where the peritoneal surface has been

greatly damaged in the presence of an infectious agent, such as ruptured tubes. But a drain harbors germs, and all wounds will suppurate in which drains are used, while few or none would if drains were not used.

W. D. Haggard, jr., said pus-producing germs were extremely dangerous, the gonococci denuding the membrane and forming a nidus for the development of pus-producing germs. The experience of abdominal surgeons is in favor of drainage. It is not difficult to sterilize gauze, but it is difficult to keep it sterile. A glass tube through the abdominal wall will soon be walled off. The natural drainage is through the vagina. Gauze may be packed too tight to drain.

G. R. West said that he almost laid aside drainage, except to take care of secondary hemorrhage. The paper gave a scientific explanation of his own experience.

Dr. Brown closed the discussion by saying that there was no objection to drainage where there was a large raw surface, but where the surface was small, as in ruptured tubes, these should be flushed with large quantities of hot water and no drainage. The peritoneal surface would take up the germs and destroy them.

Prof. S. H. Dodson, of the Chattanooga Normal University, read a paper, "Physiology of the Senses," in substance as follows: "The Old School of mental philosophers studied deductively—speculated on the nature of the mind; the New School inductively. We of to-day study the mind in its physiological bearing. Sensations, the first form of mental life, because the mind must have sense-images of the external world before the ego-self is distinguishable from the non-ego or non-self; the thinker from the thing thought. Hence importance of study of senses. Sensations differ in quality, have their local signs, and can be definitely located on the surface of the skin. The sensation of feeling two objects by crossing second finger over first and placing a round object between them is a trick not a psychological phenomenon. Sensations are referred to 'circles of sensibility' and not to mere points. Sensations are transmitted to brain in two ways: by the periphery of the spinal cord and through the gray matter of the cord. This last is the after-image of touch. Temperature, after-image of cold due to persistence of sensation and the lessened sensibility of the nerves of heat. They vanish and return about six seconds apart for twenty-five seconds. There are areas on the skin susceptible to hot and cold stimuli, called hot and cold spots. There are also pressure spots. Sensation of effort

is peripheral sensation of movement located in the head. Sensation of taste and smell are often confused. Their pedagogical bearing is great." He related a number of experiments.

J. P. Stewart said that the most interesting was the modification of the sense of taste by excluding the sense of smell in the experiments related. He gave a case where the patient had lost the sense of smell. It is from these experiments that most of our knowledge comes.

G. W. Drake called attention to the proximity of the centers of taste and smell in the brain. They probably overlap. Can't be separated.

Prof. Dodson called attention to the importance of the imagination, and related a case where a man was shot with blank cartridges and died at the suggestion of the surgeon.

W. D. Haggard, jr., Nashville, Tenn., read a paper on "Vaginal Hysterectomy for Bilateral Suppurative Processes of the Uterine Adnexa." He said that the reason for removing the uterus where the adnexa are diseased is founded on the following facts: A large number of cases where the tubes and ovaries were removed were not perfectly cured, the persistent symptom was pain; hysterectomy cured these cases. There were painful malpositions, a more stormy and protracted menopause; there was danger of adhesions to hollow viscera and subsequent obstruction. It takes no longer to do a total hysterectomy than curetting or ventro-fixation after double ovariectomy; the mortality is lower; the uterus is a part of the disease in pyogenic infection, hence hysterectomy was not the removal of a healthy intact organ. The mortality in five hospitals was 18.5 per cent in removal of tubes and ovaries alone for pus. Vaginal hysterectomy in 724 cases, 4.6 per cent. Jacob's 403 cases, 2.9 per cent. The supreme triumph of the vaginal operation was that it afforded the means of a thorough exploration essential to conservative procedure. The vaginal method is preferable, first, because the preliminary step, vaginal section, allows thorough exploration with minimum of risk; second, the vagina is the natural approach and logical avenue for drainage of the pelvis; third, it is immune from the unpleasant sequelæ of laparotomy, possibility of hernia, stitch abscess, infected ligature and sinus, and the abdominal supporter; fourth, less immediate shock; convalescence is smoother and shorter; fifth, no exposure or handling of intestines; sixth, less danger of peri-

sions. Quoting Segund: "I have arrived at the conclusion that whatever can be enucleated through the abdominal wall can also be removed through the vagina, and whatever it is impossible to enucleate through the vagina can not be removed by the abdominal method, except at the cost of procedures incomparably more grave and more laborious." Vaginal hysterectomy, stigmarized "blind surgery," has for its motto, "Do what you see and see what you do." The steps, as follows, may be varied: First, preliminary curetteage; second, completion of incision around cervix prolonged transversely in the lateral fornices; third, freeing cervix anteriorly from the bladder and ureters; fourth, application of clamps to base of broad ligaments, containing uterine arteries; fifth, amputation of cervix; sixth, median section of the uterus; seventh, enucleation of each appendage separately; eighth, application of clamps to upper portion of broad ligaments, ovarian arteries; ninth, excision of each lateral half of uterus with diseased mass.

W. E. B. Davis, Birmingham, Ala., read a paper on "The Treatment of Pus in the Pelvis." He said that the French surgeons reported inability to remove the appendages in some cases of vaginal hysterectomy for pus in the pelvis, but that the patients recovered, which demonstrated that drainage would cure many cases of pus in the tubes and ovaries. Vaginal hysterectomy for pus incision for pus in the pelvis not confined to the tubes had been practiced for a long time with good results. A considerable number of such cases required no further surgery. He claimed that large pus tubes and ovarian abscesses could be drained through the vagina with permanent recovery in a good proportion of cases where vaginal hysterectomy is recommended so highly by the French surgeons. If not relieved the patient's condition would be made better, and later on the appendages could be removed by an abdominal operation. It is very exceptional that the uterus will have to be extirpated.

J. A. Goggans opened the discussion on these papers by saying that he followed the practice of Dr. Davis. Thought we should be very conservative and seriously consider consequences of complete ablation of genital organs in young women. Every appropriate treatment was justifiable when the great variety of pathological conditions is considered. He recognized three methods of treating pus in the pelvis: First, simple incision with drainage through vagina or abdomen; second, opening abscess by laparotomy; third, opening abscess *per*

vaginam. Each is applicable to suitable cases. He related a case of laparotomy drained finally through vagina; recovery. Also one of large pelvic abscess which ruptured during examination. An immediate laparotomy saved the patient.

Dr. Haggard said that conservative methods should be exhausted. In a recent case he had opened pus tubes and did not remove uterus. In chronic cases uterus becomes diseased and causes untold misery. Here was the only difference between him and Drs. Davis and Goggans. The cases which rupture *per rectum* or *vaginam* and undergo spontaneous cure are not cases of gonorrhea, they occur in country districts.

Dr. Davis said that Dr. Haggard's position was sustained by many eminent men. When these organs are removed there is a condition of the nervous system which causes a little suffering to be exaggerated to an excruciating pain. Gonorrhea is not the dangerous disease some would have us believe. He thought a large proportion of these cases could be cured without removing the uterus, which is an important organ, after removal of ovaries and tubes. A woman is thus more natural, and the vagina does not shrivel up.

Willis T. Westmoreland, Atlanta, Ga., read a paper: "Some Remarks on Syphilis," taking the ground that it often communicated by means other than sexual intercourse: sixty cases infected from a catheter; a dozen children, from a vaccine point; danger from doctors, from servants. Hereditary syphilis is quite common.

G. A. Baxter took the ground that it would be proper to prevent the marriage of a syphilitic, even if it might seem to violate professional secrecy, through a threat of exposure to patient. In two cases he had postponed marriages with good results. In radical cases of persistence before cure the doctor can step over the bounds of secrecy and prevent untold misery.

R. P. Johnson had made it a rule to allow but few to kiss the babe. This custom is an outrage on the infant, who is powerless to defend itself, and should be prevented by parents.

Y. L. Abernathy had never seen a case contracted in the manner described in thirty years' practice, but did not doubt their existence.

C. R. Achison said that the virus was bland and had to come in contact with an abraded surface. This tends to protect the innocent. He did not see that we could do any thing about it.

Dr. Westmoreland thought that we could do much about it. At his clinic many servants were treated. Where there were lesions on the hands they were directed to quit work, and generally did so. He saw many cases not due to venery. In New York nine cases were reported of doctors who had the primary lesion on the fingers. Would prevent the marriage of a syphilitic to an innocent girl; if necessary would inform the family of the girl after telling the patient of his intention.

President J. B. Murfree, Murfreesboro, Tenn., delivered his annual address, "The Doctor of Medicine." He congratulated the society on its advancement; advocated higher and more unselfish motives in the practice of medicine; deprecated the entrance of young men into the profession simply to make money. Medicine is a poor trade for an honest man, and if money is the only object there are others that pay better. The doctor's first duty is to his patient, to give his best services. He should be ethical, not allowing the love of gain or distinction to swerve him from the right. The reputation of a brother physician should be defended. He dwelt upon our duty to the public in regard to preventive medicine and how to avoid quacks.

J. A. Goggans, Alexander City, Ala., read a paper entitled "A Few Unique Cases in Abdominal Surgery." He thought that surgeons should report their cases, especially their unsuccessful ones, for the benefit of science. He presented a specimen that contained serous and myomatous multiple follicular cysts of the ovaries from a woman fifty-five years old. Related a case of tubercular peritonitis (abdominal section). Patient had been an invalid seven months; temperature 101°, pulse 110; more than one half gallon ascitic fluid was evacuated; abdominal cavity irrigated with normal salt solution. Patient made a good recovery from incision, and was able to work most of the time. The third case was that of a child. He presented a stomach and intestines with their mesentery. Diagnosis was impossible without exploratory incision. The fourth case was that of right hemiplegia following an exploratory incision in a female sixty years old. The patient was recovering from the paralysis. The fifth was the only case that has ever recovered in America, and perhaps the only one where operation has been undertaken for exactly that condition in this country. The

patient had been out of health for two years, but her abdominal pains and enlargement had only existed eight or ten months. She had been treated for abdominal dropsy. On opening the abdomen the tumor proved to be one of the mesentery. He stitched and drained, and the patient recovered. The other successful cases were one by Bantock, of London, and one by Pean, in Paris. W. E. B. Davis had seen the case of mesenteric cyst in consultation, and regarded it as one of much interest.

Katharine R. Collins, Atlanta, Ga., read a paper entitled "Microscopical and Chemical Aids to Diagnosis," dwelling on the importance of examinations of the urine. The whole amount passed in twenty-four hours should be saved for five days in succession. The morning urine gives that of a fasting patient. She related cases illustrating her position and called attention to the use of the microscope in diagnosing many diseases, especially tuberculosis, diphtheria, and malaria, and also the changing views in regard to typhoid fever. The Eberth germ, according to Vaughan, not being the cause but an involution form of one of several germs that may separately or collectively be the cause of the disease.

C. R. Achison said that chemical diagnosis was certain and settled many points beyond dispute. There were many who claimed that the microscope could be relied on implicitly. This was not so. It had demonstrated bacteria in disease but not their causal relation.

George S. Brown wished to commend the style, matter, and timeliness of the paper, and was surprised to hear any one at this late day offer disparagement to the utility of the microscope. So far from this not being settled it may be asserted that to the microscope alone is due the credit for almost all that is accurate in our art, all that dignifies medicine as a science. The "bug" theory rules every thing; and even those few belated ones who sneer at it can not ignore its sweeping acceptance, and in spite of themselves daily do it reverence in their surgical and obstetrical practice. There are clinical uses of the microscope to which nothing else can compare in the way of diagnosis. Time is too short to notice more than the A, B, C of it: Examination of the blood in malaria, inflammations, tuberculosis, measles, scarlet fever, and all anemias, which heretofore were all a jumble of guess-work. Examination of the sputum is absolutely the only way in which a diagnosis of tuberculosis of the lungs can be made. The best schools to-day teach the microscope the entire four years, and they are turning out an

increasing army of men who will in a short time compel as universal adoption of the microscope as the thermometer now enjoys.

In closing the discussion Dr. Collins said that she had worked twenty-one weeks, eight hours a day, in a case of tuberculosis before finding the germ. There could be no doubt of the value of the microscope in many cases.

R. H. Hayes read "A Statistical Report of the More Recent Remedies Used in the Treatment of Tuberculosis, and Summary of Recent Preventive Methods of Value," in which he gave an array of clinical and bacteriological statistics from such men as Koch, Maragliano, Campana, Klebs, Hunter, and others in Europe, Von Ruck Taylor, Dennison, Vaughan, and others in America, also a report from a committee from the New Orleans Parish Medical Society in favor of the newer or biological or directly germicidal remedies originated by Koch as tuberculin, tuberculocidin, antiphthisin; also the nuclein preparations of Vaughan, and such medicines as pilocarpine and aseptolin. These statistics he claimed were good evidence in favor of the remedies, as they were clinical, and were from men prepared to apply them properly, carefully, and who had taken the proper time. The use of these newer agents had reduced the mortality rate perceptibly. He also gave an outline of the work of the New York Board of Health to restrict tuberculosis. This consisted in public and private instruction as to danger from milk and meat (bovine tuberculosis), and from dried sputum (human tuberculosis), it having been conceded that from these sources the large majority of cases were contracted. By thorough system of instruction the Board had gotten better results in preventing spread of disease, and had succeeded in reducing largely the mortality rate from tuberculosis, and had demonstrated beyond doubt that it was contagious, infectious, and preventable.

Y. L. Abernathy thought there was nothing in sero-therapy. The remedies were made to sell. Koch's tuberculin was a failure, but millions were made out of it before this was discovered. Pasteur's hydrophobia and tetanus cures, Hammond's serums, Brown-Sequard's elixir of life, all on a par. They get up wonderful statistics. Lies are divided into three classes, lies, d—n lies, and statistics. Something may develop along these lines as good as vaccination, but it is still in the future. At present they are fads, and very expensive and silly fads. Think of antitoxin at five dollars per dose. At present rate of serum craze we will ere long have—

An extract of muscle for rhematic pains,
A gray matter extract to nourish our brains,
An extract of teeth for the fellow who can't chew,
A maxillary extract to cure lockjaw,
An extract of semen to cure old men,
An extract of clitoris to raise a number ten,
An extract of hymen to preserve a maidenhead,
An essence of vagina, with seashell tints of red,
For the benefit of bachelors grim and old and gray,
Who can't and won't get married—coz they ain't built that way.

George S. Brown said that we had the two extremes in the reader and the last speaker. Koch had done more than any other man to reduce the mortality from consumption, not from sero-therapy, but because the disease was better known. The principle has not been discovered that will cure consumption. Some who make great claims do not have the confidence of the bacteriologists. When the true principle is discovered it will not require any great amount of advertising. The man may have his laboratory in the Sahara Desert, but will do a good business. In diphtheria it has been discovered that antitoxin is a success. The serum treatment offers much in the future.

Dr. Hayes said that he did not think that some of the men referred to had made any thing out of the remedies. There is something in this treatment, but it is not fully developed.

Louise Eleanor Smith, Chattanooga, Tenn., read a paper on "The Turkish Bath ; Its Therapeutic Indications," giving as indications torpid skin, rheumatism, mental depression, sleeplessness, malaria, typhoid, gout, kidney trouble, congestions of liver, spleen, and bowels, billiousness, catarrh of stomach, gall-stones, colds, etc.

Katharine R. Collins doubted its use where there was weak circulation. It was indicated in engorgements. There was little literature on the subject.

George S. Brown said such a paper was always useful. That it was a great pity that all the misdirected zeal, such for instance as that employed in antivivisection circles, could not be directed in this channel, say under the name of an International Society for the Promotion of the Bath-tub Habit.

R. R. Kime said that the difficulty was in preparing the apparatus, especially with patients confined to the house, but the freer use of water, hot and cold, would be beneficial. As we learn more of nature's remedies the better we can combat disease.

Y. L. Abernathy said that there could be no doubt as to the value of water, especially in rheumatism, syphilis, and other blood diseases.

People spend hundreds of dollars to go to Hot Springs to bathe in hot water, but there is no virtue in the water. Even if it were medicated none of it would be absorbed.

K. H. Davis indorsed the use of water internally, externally, and eternally.

Dr. Smith, in closing, said that the heart gets stronger under the bath. A bath could be improvised with a blanket and lamp. The cold spray could be easily applied.

J. P. Stewart, Attalla, Ala., read a paper on "Medicine: Hippocratic and Operatic," giving a review the the history of medicine and commenting on homeopathy, eclecticism, etc., and closing with the Hippocratic oath.

G. A. Baxter objected to classing Koch and Pasteur among the "operatics." They were not responsible for the improper use of their remedies.

H. Berlin said that human nature was the same as in the days of Hippocrates, and we were not sure he was the man he was represented to be. He was charged with setting fire to the Temple of Corinth.

George S. Brown said: "Quackery to-day is merely a remnant of what regular medicine was in the past. Paracelsus wrote a book for the benefit of young physicians, a sort of 'How to Get Along in Practice,' in which he naively advised that, when a messenger comes, to use your best endeavor to learn as much as possible from him, that you may get enough to make a diagnosis by merely looking at the patient, and thereby greatly impress patient and friends with your intuitive wisdom. Other equally quackish methods he advises with a confidence which shows that medicine at that day must have been largely pretense. Quackery has given way as medicine has advanced. It can not stand against latter-day scientific medicine, and in fighting it our most effective weapon lies in keeping ourselves abreast of modern scientific medicine."

C. Holtzclaw said that Hippocrates got his name from *hippus*, a horse, and *crates*, a judge, hence judge of a horse, and the best doctor is a judge of a horse, so he advises his students after they are graduated to go to a horse college for awhile.

Dr. Stewart disclaimed any intention to reflect on Koch or Pasteur, as was shown in his paper. Charlatans quoted such names to bolster up their cause. That Hippocrates was what he was held up to be is shown by the esteem in which he was held by his contemporaries, Plato and others. The cure for quackery lies in the future.

P. L. Brouillette, Huntsville, Ala., read a paper on "The Therapy of Antipyretics." He protested against the indiscriminate use of antipyretics in fever. Fever is nature's method for certain conditions. Nature's antipyretic, cold water, should be used for simple reduction of temperature. Quinine in large doses is a valuable antipyretic and also an antiperiodic.

J. P. Colvin indorsed the paper, and considered water the antipyretic *par excellence*. Mode of application governed by the condition of the patient; full bath hardly ever necessary for infant. Quinine is the next best antipyretic, especially in sepsis. Would caution against the continued use of coal-tar derivatives, especially where there is a weak heart, lung complications, or sepsis. Cold water is an antipyretic which can be used for an unlimited length of time without impairing vitality of patient.

J. R. Rathmell said that the profession went to extremes in using new remedies. A few years ago antipyretics were used irrespective of the disease, just so there was fever and pain present. Then the pendulum swept to the other extreme of the arc, when they were not used enough perhaps, but at this time the coal-tar derivatives are utilized on a scientific basis. In connection with these he uses the cold sponge-bath. Surplus adipose tissue is always consumed in typhoid fever before convalescence sets in.

B. S. Wert said that he did not agree with the last statement, as many fat people recover with considerable flesh. He indorsed the use of cold water.

H. Berlin said that the greatest gain in therapeutics was the antipyretics, which were not more harmful than many other remedies. They should be given by the thermometer, not by the clock. A temperature of 105° would do little harm for a short while, but if continued would be dangerous.

G. R. West said we should look for and treat the cause, and if it was not such as to be dangerous it would require no treatment. The indications for the coal-tar derivatives are as analgesic rather than as antipyretic.

W. F. Westmoreland said that the continued use of antipyretics would depress the vital forces. They should be given so as to have their maximum effect at the height of the pyrexia. In some the shock of cold water prohibits its use. Tepid water should be used; cold would do more harm than good.

R. R. Kime said the cause should be removed if possible ; then consider if antipyretics would not depress more than fever. Would condemn *in toto* coal-tar derivatives in septic infection, as the temperature is a guide as to the amount of infection. If you can not remove cause you have to treat symptoms.

P. L. Brouillette regarded cold water as the best antipyretic, next quinine. Patient should be put into bath and temperature reduced gradually by adding cold water.

Seale Harris, Union Springs, Ala., read a paper on "The Treatment of Puerperal Eclampsia."

He reviewed the literature on the subject, showing that the authorities do not recognize the value of veratrum viride, the remedy *par excellence*. The exciting cause is the retention of urinary elements in the blood ; the highly excitable nervous system of the pregnant woman predisposes to convulsions.

Prophylaxis he deemed of most importance. The urine of the pregnant woman should be examined frequently during the last months of pregnancy. By regulating the bowels and kidneys many cases can be prevented. The veratrum acts by lowering the arterial tension, not only from its effect on the vasomotor system by dilating the arterioles and arteries, but by a direct effect on the heart and pneumogastric nerves, lessening the force and frequency of the heart's action, and therefore lessening the amount of toxines flowing to the nerve centers. The veratrum has also a sedative effect. He uses 15 to 20 drops hypodermically, guarded by one sixth to one fourth grain morphine to prevent nausea and depression sometimes seen in the specific effect of veratrum viride. He continues it in 5 to 10 drop doses often enough to keep the pulse-rate below 60, claiming that when so used it will in all cases control the convulsions, giving time to restore if possible the functions of the kidneys and bowels, and if necessary to remove the offending fetus. If the convulsions occur before labor they should be held in abeyance twelve to twenty-four hours, and if the functions of the bowels and kidneys can not be restored in that time the interest of the mother as well as the fetus demands the induction of premature labor.

W. F. Westmoreland did not think that the explanation that veratrum viride bled the patient in his own vessels sufficient. There is some action we do not understand. The maximum action is felt two hours and a half after taking, so if it does not get an effect in an hour one feels justified in repeating dose.

R. R. Kime said veratrum was our safest and most efficient remedy. It is said to act by bleeding patient in his own veins, by sedation and by arousing glandular secretion. Bleeding is indicated in stout, plethoric patients, but we must not lose sight of the fact that bleeding favors infection. There are three classes: hysterical, epileptic, and apoplectic, the last the most serious.

J. P. Stewart indorsed the paper. He related three types which had recently come under his observation. No. 1. Patient was yet in two months' expectancy; chloral, morphine, chloroform, and blood letting gave no relief, so abortion was produced and patient recovered. No. 2. In normal labor when convulsions occurred, veratrum, morphine, and chloroform failed. Immediate instrumental delivery gave instant relief. No. 3. Convulsions occurred after parturition, controlled by morphine and chloroform.

B. S. Wert had used veratrum and believed it a good remedy. Cases should be delivered at once.

G. R. West, though believing in veratrum, had no experience. Had been able to successfully treat his cases with large doses of morphine hypodermically, chloral by enema, and the use of chloroform. He advised emptying the uterus, as the cause was always due to presence of child whatever the theory of eclampsia. Had used blood-letting, but now adopted rapid delivery, and even in those cases where blood-letting was rationally needed considered it best to allow the blood lost from the uterus to be sufficient.

Seale Harris said that veratrum acted on the vagi, thus lessening the force of the heart's action.

The following were read by title: "The Woodbridge Treatment of Typhoid Fever," J. W. Duncan, Atlanta, Ga.; "Diseases and Treatment of the Accessory Sinuses of the Nose," B. F. Travis, Chattanooga, Tenn.

The following officers were elected for the ensuing year: President, Willis F. Westmoreland, Atlanta, Ga.; Vice-Presidents, M. B. Hutchins, Atlanta, Ga., Seale Harris, Union Springs, Ala., C. R. Atchison, Nashville, Tenn.; Secretary, Frank Trester Smith, Chattanooga, Tenn.; Treasurer, George R. West, Chattanooga, Tenn.

Adjourned to meet in Nashville, Tenn., on the second Tuesday in October, 1897.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÂ."

Vol. 22.

SATURDAY, DECEMBER 12, 1896.

No. 12.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.
JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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KLEPTOMANIA AND "SHOPPING."

Under this suggestive heading the Journal of the American Medical Association, 14th ultimo, discusses the features legal and psychological of the case of Mrs. Castle, now notorious through the secular press.

This woman was the wife of a wealthy Californian, who on her arrest gave bail in the high thousands, and secured the best legal and expert alienistic talent attainable to save her from a common criminal verdict. She was pronounced a kleptomaniac by the eminent English alienist, Dr. Savage, which resulted in a light sentence and speedy release at the hands of the English court.

In the opinion of the writer "the light sentence and speedy release demonstrate the validity of this diagnosis," and in this connection the results of Lacassagne's recent study of the relationship of kleptomania to "shopping" are given at length and with due comment.

The writer thus closes his very interesting paper:

Lacassagne, like Benjamin Franklin, thinks "bargain" stores a serious social danger to the body politic. Many women who never have stolen and who would never steal elsewhere find themselves there bewitched and excited to take. It is truly a diabolic possession. In the midst of a hurrying crowd, in the odorous, overheated, wealth-suggestive atmosphere, the woman finds herself with clothing aptly adapted to hide stolen objects. At

certain hours there are too few employes to serve the enormous crowd which waits its turn, touching and taking goods whose splendor and variety bewilder.

Certainty of detection would undoubtedly serve as a deterrent in many cases. As Lacassagne remarks, it would be better, especially for the mentally unstable women, to catch the thief rather than merely to prevent theft.

The "collector" type is as a rule perfectly responsible. "Book snatching" is a besetting vice of many bibliomaniacs, just as coin and stamp purloining attacks numismatists and philatelists.

While kleptomania in the United States is legally a defense for crime, it remains to be determined in each case whether kleptomania exist and whether it merely extenuate or completely absolve. Where states predisposing to mental instability exist, the burden of proof of sanity is on the State. In the "collectors" the burden would be on the accused. Stealing of relatively worthless articles is, by itself, no evidence of insanity. Parisians think it "smart" to steal sugar and matches from restaurants. Not a few sane Americans think it equally "smart" to steal rides on railroads. Deterrent influences must be carefully adjusted to each case, since, as Lacassagne shows, the chief object of certain women in stealing is to secure the voluptuous titillation that worry and fright over detection gives them. On the other hand certain victims of kleptomania must be held responsible if they persist in going to "bargain" stores when they have learned the danger of these to their mental stability. There is no need for new legal principles in these cases. The common law properly interpreted is, in English-speaking States, amply sufficient to protect the rights of the accused and the community.

Such cases are certainly very interesting subjects for neurological study; but whether in the end the refined discrimination of the alienist does not result in great injustice to what are called thieves in common and police court parlance may be seriously questioned. For who shall say that, of the thousands of poor wretches who are daily sent to the work-houses and penitentiaries by lower and upper courts, there is not a large percentage who would be adjudged kleptomaniacs rather than thieves upon the lucid testimony of a Savage or a Lacassagne? If this is so, our courts are doing a deal of injustice in the name of justice by not employing an expert alienist to pass upon every case of larceny, *petit* or *grande*.

Notes and Queries.

DISINFECTION OF THE URETHRA BY THE INTERNAL ADMINISTRATION OF ENTEROL.—Fass (*Centralbl. für die Krankh. der Harn und Sexual Organe*, 1896,) states that enterol is a watery, colorless, sometimes slightly brown liquid, with a specific gravity of 1.036, and with the taste and smell of kressol. It is slightly soluble in one hundred parts of water, and has about six times the antiseptic strength of carbolic acid. Properly diluted—that is, one part of enterol to five hundred of water—it can be given in the dose of from half a dram to a dram daily for months at a time without producing any untoward symptoms. It is given in pill, capsule, and mixture with equal parts of olive oil.

Thirty capsules can be taken at once without harm. After entering the stomach about eighty per cent remains in the alimentary canal and twenty per cent is excreted by means of the urine. If employed in weak dilution and with abundance of liquid, the probability is that much more is absorbed. In the treatment of bacterial inflammations of the genito-urinary tract, the patient is gently purged, the lower gut washed out with clysters of water or neutral oil, and a milk or liquid diet given, enterol being administered with each repast. After large doses and prolonged use of enterol the urine sometimes turns green. The author states, however, that he has given the drug in doses of one half to one dram daily for weeks, the urine exhibiting the characteristic gray-green color, without producing any systemic complications. Indeed, the drug does not produce the slightest irritation in the kidneys or genito-urinary tract, and even in chronic nephritis the albumin contained in the urine is not increased. Nevertheless, we are cautioned against the use of the drug in cases of acute nephritis, congestion of the kidney, or feebleness of the heart. The drug possesses the merit of being safer and more efficient than any of the non-internal antiseptics. Nervous women, after taking the capsules, complain of an unpleasant taste in the mouth and burning in the stomach. When there is marked inflammation of the stomach the drug should be greatly diluted. In the case of gastric ulcer the drug should not be exhibited. The indications for the use of the drug are for the cure of cystitis, pyelitis, and before and after operative interference with the urinary passages in cases of acute gonorrhea. In the latter affection the enterol is particularly efficacious, eight capsules being given each day.—*Therapeutic Gazette*.

DIABETIC GANGRENE.—Kornig (*Berliner Klin. Woch.*, No. 25, 1895,) has shown that sloughing inflammations are often the first signs of diabetes in apparently perfectly sound, strong men, and whenever in this class of

patients such forms of inflammation as (for instance) carbuncles develop, the urine should be examined. It must, however, be remembered that in the acme of many inflammatory processes sugar is occasionally found in the urine, but rarely in large quantities, and customarily vanishes when the inflammation has passed the acme. The local treatment of inflammation in diabetics must always be associated with most rigorous constitutional treatment. It is a matter of prime importance to promptly limit the extension of the gangrenous process. When this process is not associated with active inflammatory symptoms, every effort should be made to keep it dry, blisters from necrotic pieces of skin should be cut away, and every wet dressing avoided, even though containing disinfectants; the parts should be dressed with dry iodoform cotton, and so arranged that the air may reach them. When the inflammation is pronounced, long incisions may be made and the necrotic parts removed. When the limb is affected with gangrene it is well, if possible, to wait until by antidiabetic treatment and dry dressing the process has ceased to extend. This, however, is often impossible. Gangrene is prone to steadily spread and the sugar not diminish; the patient becomes feverish, comatose, and perishes. Under these circumstances the only treatment to be considered is removal of the gangrenous limb. Radical operation, then, is indicated when inflammation is extending in spite of energetic antiseptic treatment, when fever is increasing and sugar not diminishing, and when coma is threatening. The surgeon who amputates must, however, be absolutely sure of his asep-sis.—*Ibid.*

SUCCESSFUL SUTURE IN PERFORATING TYPHOID ULCER.—Dr. F. S. Watson (Boston Medical and Surgical Journal) reports the case of a man, twenty-eight years of age, who in the seventh week of typhoid fever was suddenly seized with severe pain and great tenderness of the abdomen, accompanied with a sharp rise of temperature. When seen by the author twelve hours later there were signs of beginning collapse. The abdomen was opened by a small incision; the peritoneum was found to be thickened, and a loop of the small intestine was attached to the abdominal wall by recent and delicate adhesions; in the center of the adherent area there was a perforation of the intestine, with a ragged border, and of the size of the end of the thumb; from this feces were oozing. There was a localized but no general peritonitis. The perforated knuckle of the bowel was drawn out of the wound, the edges of the intestinal ulcer were excised until sound tissue was gained, and then sutured together with a continuous Cushing suture of fine silk. No other ulcers were found, and the bowel was returned and the abdominal wound closed. There was a good deal of shock, but the patient rallied soon, and convalescence was uninterrupted. This the author believes to be the sixth successful case of laparotomy for perforating typhoid ulcer.—*International Journal of Surgery*, July, 1896.

THE PRESS AND THE PROPAGATION OF CRIME.—At the Congress of Criminal Anthropology recently held at Geneva Dr. Aubry made some remarks on this important question. In his opinion the press is unfortunately of the greatest use to those who are studying the methods of criminal proceedings. The detailed accounts of trials teach malefactors all the weak points of the law and all the best methods of avoiding justice, and by a little patient study an ordinary criminal of little or no originality is able to educate himself by means of the experiences of his less fortunate brethren. As Dr. Aubry says: "The newspaper admirably points out to clever people how they may succeed in walking without risk on the margin of the Criminal Code and how they may avoid or circumvent some dangerous clause. There is also another side of the question, and that is the effects which criminal details produce on those whose nervous systems are unstable; they may naturally have no tendency to crime at all, but continually reading about it may easily excite them and prove a dangerous incentive to many bad deeds which would otherwise have been unthought of. It is most desirable that the details of criminal reports should be judiciously cut down before publication?"—*Lancet*.

NEW REMEDIES IN GYNECOLOGY.—*La Medicine Moderne* calls attention to two new remedies, irol and formol. Irol contains 45 per cent of oxalate of bismuth and 24.8 per cent of iodine. It is a fine greenish powder, without taste or odor, insoluble, becoming red and setting free iodine on contact with moist air or warm water. It is not toxic and does not irritate the skin. It has been employed by Hogler in more than two thousand cases in the form of powder, gauze, vaseline, collodion, and emulsion. It has been found especially efficacious in the treatment of ulcers and boils.

Formol, a colorless gas, is very soluble in water and alcohol. It is powerfully antiseptic and non-toxic, and has been used for the preservation of food by means of a specially constructed alcohol-vapor lamp. It is possible to absolutely sterilize large rooms, the vapor given off being formaldehyde, which, though irritating to the mucous membrane, is not poisonous.

Legen and Levy state that they have obtained excellent results from these medicaments in the treatment of blennorrhagia. Irol is used in emulsion in glycerine and water. This drug prepared with solidified glycerine is also often extremely valuable in the topical treatment of uterine and other gynecological affections. The usefulness of solid glycerine ovules of irol, formol, dermol, aristol, iodol, di-iodoform, ichthyol, microscidine, and thiol commends itself at once to all those whose line of work brings to them many cases of infection of the genital tract.—*Therapeutic Gazette*.

NEW METHOD OF OPERATING FOR HYDROCELE.—Surgeon-Lieutenant-Colonel E. Lawrie, of Hyderabad (*The Lancet*, June 13, 1896), presents the following technique in the operation for the radical cure of hydrocele: The sac is punctured in the usual way, and when about a third or one half of the

fluid has been withdrawn two drams of a saturated solution of bichloride of mercury in glycerin are injected and mixed with what remains, and allowed to rest in the sac for from half a minute to a minute. The whole of the fluid is then drawn off to the last drop. Very little pain is experienced, and unless the patient is nervous and takes chloroform he is able to move about immediately after the operation. For the next few days he must, as a rule, lie about, but need not in any case be confined to bed, and in a week or less he is quite well. Provided the surgeon is careful that his hands and instruments and injections are clean and free from micrococci when the puncture and injection are made, these produce a uniform result, that is, sufficient aseptic inflammation to obliterate the sac and nothing more.—*ibid.*

DECIDUOMA MALIGNUM.—At the last meeting of the Obstetrical Society Dr. Julius Neumann gave full details of the clinical history and *post-mortem* appearances of a case of deciduoma malignum occurring in a woman thirty-five years of age. Four weeks after her last confinement she was seized with profuse hemorrhage, which persisted in spite of the use of ergotin and other hemostatic remedies: she also had pains in the abdomen; the external os uteri admitted one finger, the cervix was closed, the uterus was somewhat enlarged and movable, and its consistence was diminished. The diagnosis was verified by microscopical examination of the curetted tissue and total extirpation was performed. Some weeks after the operation the patient began to expectorate a copious brown sputum containing numerous elastic fibers and epithelial elements with pus cells; she also became very ill, and ultimately died from general exhaustion. The uterus was shown by Dr. Neumann. It had, especially in the body, the appearance of a gravid uterus; hyperemia and serous infiltration of the muscular layer were well marked. At the fundus there was a growth, of a grayish and necrotic color, of the size of a pigeon's egg, which extended to the origin of the fallopian tube, and was apparently a large-celled sarcoma with the typical "syncytium." Both lungs contained tumors, some of which had already invaded the visceral pleura. Dr. Neumann pointed out the necessity of making an early diagnosis and performing vaginal hysterectomy.—*Lancet.*

A NEWLY-DISCOVERED CONSTITUENT OF THE BLOOD.—Dr. Müller has given an account of certain objects, not hitherto described, which are to be found in every sample of blood, both in health and disease. They resemble fat globules, but must not be confounded with fragments of the white or red corpuscles; their size is variable, the largest diameter being 1μ ($=\frac{1}{2500}$ of an inch). They may be seen to show movement and are not affected by osmic acid. Dr. Müller has named them "hemokonia" (blood dust).—*Ibid.*

Special Notices.

THE UNTOWARD EFFECT OF SUBSTITUTES.—A. M. Collins, A. M., M. D., of Shelbyville, Ill., writes, under date of November 2, 1896: "I never realized the vast difference between genuine antikamnia and the various substitutes that are being palmed off until within the past few days; and the realization was all the more pronounced because I myself was the patient.

"For four weeks I had been suffering with neuralgia of a very severe type and attended with considerable febrile movement. I tried the various compounds and other preparations lauded as 'just as good,' but with no real advantage and with no little heart disturbance.

"On Saturday I went to Arcola, and while there was taken very sick with one of my neuralgic attacks. I sent to the drug store for some genuine antikamnia, and to be certain about it procured an unbroken original package. I took it in eight- to ten-grain doses at intervals of two hours. The effect was magical, the first dose relieved the severity of the pain, while the second quieted it entirely, and I went to bed, sleeping all night with one awakening of a few moments only, a thing I had not done in four weeks. This experience on my own person has thoroughly convinced me of the superiority of the genuine antikamnia."

AN IMPROVEMENT in elastic stockings, relieving the wearer of much trouble, and increasing their wearing qualities, is embodied in the "Master" Surgical Elastic Stockings, made by the Pomeroy Company, 19 M., Union Square, New York. The improvement consists of patent non-elastic adjusting loops and stays, by which the stocking can be drawn on or off as easily as a boot. They are made in all sizes. Illustrated catalogue and directions for measurement will be sent by the manufacturers on request.

J. J. GRANT, M. D., Monticello, Fla., says: I find nothing in the *materia medica* to equal ALETRIS CORDIAL in uterine diseases. I have used it in a very obstinate case, which outstood several important remedies. When I put the patient on ALETRIS CORDIAL, every disease symptom disappeared in a week's trial. I have used it in several cases, and can therefore say that it is an active and powerful agent for diseases of the womb.

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THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ"

VOL. XXII. LOUISVILLE, KY., DECEMBER 26, 1896.

NO. 13.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

ANALYSIS OF GASTRIC CONTENTS, WITH SPECIAL REFERENCE TO HYDROCHLORIC ACID AND THE FERMENTS OF THE STOMACH.

BY LEON L. SOLOMON, A. B., M. D.

Assistant in Chemistry, Kentucky School of Medicine, Louisville, Kentucky.

In the examination of the contents of the stomach especial importance attaches itself to a determination of the presence and the estimation of the per cent of hydrochloric acid in the specimen. This fact is readily understood, when the valuable functions of hydrochloric acid in the stomach are recognized, and when it is considered that the presence of the acid in normal amount is dependent upon so many conditions which even trivial disorders seem to modify. To demonstrate the presence of pepsin, and to estimate its per cent, is not so important, since only when the stomach is the subject of considerable structural change does the amount of pepsin so decrease as to modify digestion, and a total absence of pepsin—a condition of so-called "apepsia"—is indeed rare. Essential to a normal production of hydrochloric acid are, first, a normal, healthy glandular apparatus in the mucous membrane of the stomach; second, the presence in the blood of the necessary ingredients and in sufficient amount for the manufacture of the acid; third, a vagus and sympathetic nerve force whose equilibrium is perfect.

To deny that the same forces are not in effect as regards the production of pepsin is not my purpose in this article, but it is a fact

that with these forces acting, and with an analogous morbid condition present, the total of pepsin produced will much more nearly approach normal than will the total of hydrochloric acid. In other words, hydrochloric acid is more often increased in amount, lessened in amount, or entirely absent from the gastric juice than is pepsin under the same circumstances, and this is one reason, as was stated above, why to find hydrochloric acid and to make out its per cent becomes so important a procedure. What are the functions of hydrochloric acid? They are antiseptic, antiferment, and chemical.

Many micro-organisms which might otherwise find a good medium in the stomach for their cultivation, and which might quickly increase, and by their numbers, or by some toxic product produced, soon overwhelm the individual, are denied this privilege, because of the acid constitution of the gastric juice, which immediately destroys them or renders them less active. This property of hydrochloric acid is surely a very wise provision on nature's part. Our forefathers in medicine made use of it, although they knew nothing of the present germ theory as we accept it. It was their custom before entering the sick-chamber of one suffering with some highly infectious disease to partake of a morsel of food, and it was not uncommon to find the medieval doctor with a particle of food in his pocket. Of this he would partake as he made his daily rounds before entering the sick-room. Little or nothing was known by him of the chemistry of the gastric juice. Experience had taught him that his power of resistance could be made greater by eating, and he willingly followed the teaching of this experience.

As an antiferment the action of hydrochloric acid is very decided. Without the normal per cent of the acid the food in the stomach undergoes rapid fermentation, giving rise to large quantities of gas and of organic acids. Digestion is now imperfectly completed, and many disagreeable symptoms associated with indigestion arise.

From the standpoint of digestion, however, the third, viz., the chemical action of hydrochloric acid is most important. By this action we understand the chemical part played by hydrochloric acid with reference to pepsin and to albumins. The glandular apparatus of the stomach, as is well known, does not produce pepsin, but produces a ferment called pepsinogen. This ferment is inactive, and will not digest albumin until the hydrochloric acid has acted upon it and transformed it into the active ferment, pepsin, when it is ready to begin its trans-

formation of albumin into peptone. But even now hydrochloric acid has another duty to perform before the digestion of the albumin can go on; it must first act upon the albumin to form acid albumin or syntonin. Granted that sufficient acid is present to transform all the albumin into acid albumin and all the pepsinogen into pepsin, then if pepsin be present in normal amount digestion may proceed up to complete peptonization. Besides pepsinogen there is produced in the stomach a second ferment, called labzymogen, which when acted upon by hydrochloric acid is changed into the active ferment labenzyme. The office of this ferment is to coagulate the milk, viz., to precipitate its casein preparatory to subsequent digestion. Essential to the action of pepsin and of labenzyme then is an acid medium. Hydrochloric acid, the normal acid of the gastric juice, furnishes such a medium. In its absence digestion may go on, though very imperfectly, the organic acids furnishing the required acid medium.

Normal gastric contents contain from 0.1 to 0.2 per cent of hydrochloric acid, of which the larger portion is free, and a small part is combined with the albumin, as acid proteids. The total of this free and combined acid does not represent all the acid which is produced in the stomach, since some of that which is manufactured is again absorbed, while another portion passes the pylorus, and entering the intestine may be absorbed or may be rejected as part of the fecal contents.

To demonstrate the presence of hydrochloric acid there are many tests in use. The volume of this paper will not permit me to name more than one or two of the better tests, which I shall briefly describe.

Litmus paper is not trustworthy, since it reacts to the organic acids and to the acid salts as well as to hydrochloric acid, while Congo red, methylene violet, tropæolin oo, etc., do not react to the organic acids, except their per cent be much greater than is customarily found in the gastric contents.

Congo Red Test: An aqueous solution of Congo red is the most delicate test known for hydrochloric acid; 0.05 per cent of the acid can be demonstrated by this test. The solution of Congo red seems to be more delicate than the Congo red papers which are to be had on the market, but if the papers are freshly prepared they should be as delicate as the solution.

Technique: Place one inch of the Congo red solution in a test tube, and add slowly of a specimen of filtered gastric contents. Hydrochloric acid, if present, will turn the solution blue.

The Congo red papers are made by saturating a good quality of white filter paper in the aqueous solution of Congo red. The papers are dried, and a drop of filtered gastric contents placed on the paper causes a dark blue spot if hydrochloric acid be present. If the spot is pale blue or violet, then hydrochloric acid is present in less amount than 0.05 per cent, or the organic acids have caused the color reaction.

Tropæolin 00 Test: A saturated alcoholic solution of tropæolin 00 is used, and the method employed by Boas is probably the best way to apply the test. He places four drops of the saturated alcoholic solution of tropæolin in a porcelain dish, and by tilting the dish causes the solution to be spread out over the surface of the porcelain. Next, four drops of filtered gastric contents are spread out over the same surface, and gentle heat slowly applied. As evaporation and drying gradually proceed beautiful lilac and blue stripes appear about the circumference of the dish if hydrochloric acid be present. Boas has claimed that only hydrochloric acid produces this color reaction, and that it is never the result of the organic acids. Tropæolin papers are prepared just as Congo red papers were made. When a drop of filtered gastric contents is added to one of these papers the presence (0.05 per cent) of hydrochloric acid causes a dark, reddish-brown spot. If the spot is allowed to slowly dry (or if gentle heat be applied to the paper) the spot turns to a lilac color. When the organic acids are present in a large per cent a faint brown spot may appear, which gentle heat (or slow evaporation in the air) causes to disappear. These two tests are always sufficient to prove the presence of hydrochloric acid; but, since the "Mintz method for estimating total acidity" makes use of Günzburg's test, it were well to describe the latter before taking up the test for total acidity.

Günzburg's reagent consists of phloroglucin two parts, vanillin one part, and absolute alcohol (by weight) thirty parts. The reagent is not stable, so a small quantity had better be prepared *fresh* each time. The test is applied to a porcelain dish just as in the tropæolin test. Three drops each of the Günzburg reagent and of filtered gastric contents are used. A reddish mirror, consisting of small crystals, which appears on the porcelain dish as drying takes place indicates hydrochloric acid. Prepare some strips of Günzburg paper and dry them. A red spot resulting from a drop of filtered contents on the paper indicates hydrochloric acid. This spot is insoluble in ether.

The Mintz Method for Estimating Total Acidity: There are needed to perform this test a quantity of deci-normal sodium hydrate solution,

some strips of freshly prepared Günzburg and Congo red paper, and a one-per-cent alcoholic solution of phenol-phthalein. By this method of Mintz the free hydrochloric acid is first determined, the test depending on the fact that the alkali sodium hydrate will first combine with and neutralize the free acid, and later the acid proteids or combined acids.

Technique: Ten cubic centimeters of filtered gastric contents are placed in a beaker, and from a graduated burette a deci-normal sodium hydrate solution is gradually and carefully added until the gastric contents will no longer turn the strips of Günzburg paper red. This means that all of the free acid has been neutralized by the sodium hydrate. Now it has been determined that a cubic centimeter of this deci-normal sodium hydrate solution will neutralize 0.00364 gram acid, so it is only necessary to read off the amount of solution used, and multiply this figure by the above decimal to obtain the result. Example: If $3\frac{1}{2}$ cubic centimeters sodium hydrate solution were used, as shown by the reading on the burette, then we will have $3\frac{1}{2} \times 0.00364 = 0.01174$. Multiplying this result by ten, which was the amount of gastric contents employed, and we have 0.1174. This last figure represents the amount of free hydrochloric acid present. The 10 cubic centimeters gastric contents used in the above test are further employed in estimating the per cent of organic acids and of acid proteids, as follows:

On a strip of freshly prepared Congo red filter paper place a drop of the gastric contents. A blue spot indicates acid. Add carefully from the measured quantity of deci-normal sodium hydrate solution (in the burette) until no further color reaction will occur on the Congo red paper. Read off the amount of sodium hydrate used, and again multiply by the same decimal 0.00364 and by 10 to get the per cent of organic acid present. Example: If the burette shows that 0.75 cubic centimeter sodium hydrate were used we will have $0.75 \times 0.00364 = 0.00273 \times 10 = 0.0273$, which is the per cent of organic acids.

The process is concluded by estimating the per cent of acid proteids. To the 10 cubic centimeter gastric contents already employed in the above two tests add about five drops of a one-per-cent alcoholic solution of phenol-phthalein, and carefully of the sodium hydrate solution, until a pink color reaction is produced. Read off the quantity of sodium hydrate solution used, and multiply once more by 0.00364, then by 10 to obtain the per cent of acid proteids; thus, if one cubic centimeter were used, we will have $1 \times 0.00364 = 0.00364 \times 10 = 0.0364$.

The total acidity will be a sum total of all the acids found; in this case 0.1174 plus 0.0273 plus $0.0364 = 0.1811$. The total of free and combined hydrochloric acid will be a sum total of 0.1174 plus $0.0364 = 0.1538$.

In testing for the presence of pepsin two methods are open to use. We can either test for pepsin itself or for peptones. If peptones are found in the gastric contents, then we know pepsin must have been present to convert the albumin into peptone.

Test for Peptone: Strongly alkalize two inches of filtered gastric contents (in a test tube) with potassium or sodium hydrate. Drop by drop add of a solution of copper sulphate (grain $\frac{1}{2}$ to aqua ounce 1), and a change in color from the blue to a deep red indicates peptone. This is the so-called "Biuret reaction."

Test for Pepsin: The following test depends upon the ability of pepsin to digest albumin. The failure of a given specimen to accomplish such digestion may be due to a lack of sufficient hydrochloric acid in the specimen, therefore it is best to use two test tubes in making this test. To one of these test tubes hydrochloric acid should be added as a precaution.

Technique: In each of the two test tubes place two inches of filtered gastric contents. Acidulate one of the tubes with two or three drops of hydrochloric acid. Now add to each tube a small piece of boiled egg albumin, and set both tubes aside, at a temperature of about 98 to 100 degrees for thirty to forty-five minutes. If pepsin is present the pieces of albumin at the end of this time will have entirely disappeared, or at least will have become smaller and rougher in appearance, viz., the pepsin is causing their digestion and solution. To verify the result the peptone test may now be applied. A simple means of estimating approximately the per cent of albumin is by the method suggested by Boas. He uses either an artificial gastric juice which he prepares with pepsin or hydrochloric acid, or he works with a standard specimen of gastric contents obtained from some healthy individual. The digestive power of either is known to him, and he compares the digestive power of the sample to this standard figure, as follows: If the specimen under consideration digests a certain quantity of albumin in a given time, Boas would call the per cent of the pepsin present in the specimen of gastric contents "normal." If twice as long a time is required for the digestion, then the per cent is only half normal; if three times the time is required the per cent of pepsin is only one third normal, etc.

Test for Labenzyme: One inch of gastric contents in a test tube. Neutralize same with potassium or sodium hydrate. Add one inch of boiled or unboiled milk, and set aside at 98 to 100 degrees for about fifteen minutes. If labenzyme be present the casein is coagulated and falls to the bottom of the tube.

These tests for hydrochloric acid and for the ferments of the gastric juice are so simple of execution, and at the same time so trustworthy, that no one need deny himself the privilege of performing them. There is no complicated working material needed, and the reagents are none of them difficult of preparation.

In gastric disturbances too high an estimate can not be placed on the analysis of the stomach contents. The information thus obtained is an aid to more thorough diagnosis and affords valuable hints as to therapeutics. Surely nothing can be more unscientific than the indiscriminate prescribing of pepsin in various disorders of the digestive tract, and this, too, notwithstanding the fact that except in diseases which have brought about considerable structural change in the stomach walls, repeated analysis of gastric contents has proven that there is, as a rule, sufficient pepsinogen present to accomplish the transformation of as much albumin as is usually taken at any one single meal, provided hydrochloric acid is normally present.

It is hydrochloric acid which is most frequently wanting, and since an analysis of the gastric contents readily and quickly discloses this defect, the rational plan of therapeutical procedure as readily suggests itself.

I would also say a word about the method of prescribing pepsin. Since it is an established fact that alcohol, even when very dilute, will take up only a small per cent of pepsin, it were well if we should discard the various "wines" and "elixirs" of pepsin which are on the market for the more satisfactory standard "pepsin in scales" or powdered pepsin. To combine pepsin with pancreatin is absurd. One acts only in an acid medium and the other only in alkaline medium.

The analysis of the gastric contents indicates plainly whether pepsin is wanting, and if it should be supplied artificially. Possibly it is the starchy foods which are not being digested and which are giving rise to digestive disturbances. This may be due to a faulty insalivation, associated with a too hasty mastication, or to a lack of ptyalin in the saliva. Possibly an early hyperacidity of the stomach is neutralizing the saliva and preventing the action of the ptyalin. The latter is, however, hardly

probable, since the action of the ferment, ptyalin, is an immediate and momentary one. In the normal healthy stomach, however, there should be no free acid for the first ten minutes after food has entered the organ, and ptyalin, if present, is permitted to exert its influence upon the starches during all this time.

Examination for undigested starches in the gastric contents may reveal the fact that the ptyalin is performing its duty well, nevertheless evidence of considerable digestive disturbance may exist. In a large per cent of cases a decreased amount of hydrochloric acid or its total absence is accounting for such indigestion. To call such conditions "dyspepsia" when an abundance of pepsin is present is a gross error. The term when so applied is a misnomer. The bulk of dyspepsias are indigestions associated with faulty hydrochloric-acid production. How often are acute indigestions observed in those whose emotions have suddenly been aroused? The individual is the subject of some sudden joy, sorrow, grief, or fright, and the hearty meal which has been eaten goes undigested. A disturbance of vagus and sympathetic nerve force has been brought about by the emotional excitement and production of hydrochloric acid has been faulty.

The therapeutics of hydrochloric acid in digestive disturbances is dependent upon the time of its administration. If the acid be given before meals it acts as a stimulus to digestion, in so far as it rouses the glandular apparatus of the stomach to secrete. If the acid be administered during meals it prevents fermentation of food and supplies the necessary acid for the conversion of the inactive ferments, pepsinogen, and labzymogen into the active ferments, pepsin and labenzyme. At the same time it converts the albumins into acid albumins (preparatory to their peptonization) and exercises a very decided antiseptic action. Instead of the routine prescription of pepsin, if a record be kept of a consecutive number of patients who present themselves to the doctor, complaining of the ordinary discomforts of indigestion, and to whom hydrochloric acid is given either before meals or during the meal time, the case-book will show a much larger per cent of salutary effects.

In conclusion, and to emphasize the main purpose of the paper, that is to say, the necessity for a careful determination of the presence, and an estimation of the per cent of hydrochloric acid in the stomach contents, I shall briefly call attention to the practical uses to which such information may be put, and the great aid it affords in finally arriving at a correct diagnosis by enumerating the following clinical data:

(a). Hydrochloric acid is as a rule in excess in ulcer and in gastric neuroses. It has been found in excess in beginning gastric catarrh, but later on always falls below the normal amount.

(b). Hydrochloric acid is decreased in amount in fever, in anemia, and in so-called atonic dyspepsia.

(c). Hydrochloric acid is as a general rule almost if not entirely absent in cancer of the stomach, in chronic gastric catarrh, in atrophy, and in amyloid degeneration of the stomach, and in advanced dilatation of the organ from any cause.

The absence of hydrochloric acid in dilatation of the stomach is caused by the destruction of the acid glands in the dilated organ, or probably an embarrassed nerve or blood supply is responsible for the lack of acid. In cancer the acid is not always missed, but since malignant disease, above all other morbid conditions, is most often associated with its absence, the presence of free hydrochloric acid in a specimen of gastric contents is always a diagnostic point opposed to cancer. Especially is this true if there is no tumor and no cachexia; but since the tumor may be too small to palpate, and so situate as to cause no obstruction, and therefore no dilatation, hydrochloric acid is at times present in abundance when the autopsy reveals well-marked malignant disease.

LOUISVILLE.

CIRCUMCISION OF THE YOUNG.

BY EWING MARSHALL, M. D.

*Member Board U. S. Pension Surgeons; Physician in charge Louisville P. E. Orphan Asylum;
Physician to Home of Friendless, etc.*

The subject of infantile circumcision has from my earliest professional studies been one of great interest to me. One of the pleasantest recollections of my undergraduate days was in hearing Prof. W. O. Roberts in a clinical lecture state the multitudinous ills that were due to adherent prepuce, and seeing him strip back the prepuce, with the subsequent history of the disappearance of the nervous symptoms that had been present. In my position as chairman of the Medical Board of the Home of the Friendless, and being on duty there one third of the year, I have come in contact with the question in a serious way. Some members of the Board of Managers are possessed with the idea that every foreskin should be clipped and abbreviated to such an extent as to relieve the glans penis almost entirely of its natural hood.

Investigating the literature on the subject I found such diverse opinion that I was somewhat at sea, so I took it upon myself to make a study of the subject during the last two years. I will not prolong this simple article by any detailed account, but will summarize my experience.

I have found in the majority of the male children harbored by the Home one of three conditions, and in a small proportion all were present:

1. Redundancy of foreskin protruding in a more or less narrowed condition beyond the glans.
2. Great narrowing of the prepucial opening.
3. Adherent prepuce.

Now, as to the caring for this condition. Shall we or shall we not circumcise our male babies, as the great Hebrew prophet recommended to his people, on the eighth day or thereabout? The arguments for it are based upon the claim of cleanliness in the first place, and as a preventive of venereal trouble later on. With the latter subject I will not deal in this paper. Retained smegma, I am confident, produces nervous manifestations that, if not allowed to last too long, are relieved by removing the cause. Of course nobody will misunderstand this to mean that chorea or other nervous trouble dependent upon some blood dyscrasia will be relieved promptly, but I believe that irritation around the corona, due to retained smegma, may act as the exciting cause, and that relieving it will allow nature to be more promptly assisted to restore the normal nervous equilibrium. But is it necessary to remove the prepuce? In the great majority of cases I say, No. When all three conditions alluded to above are present in an extreme degree, then a cutting operation is demanded.

Generally, in my experience, forcibly stripping back the prepuce and several times daily forcing it back, each time anointing the parts with a lubricant, afterward relieves both elongated and narrowed prepuce. In some cases it is impossible with the hands alone to perform this little task. Slipping a pair of forceps just within the prepucial orifice, being sure not to enter the meatus, you can stretch the foreskin and then slip it back. On one occasion my attention was called to a growth beneath the foreskin, the mother telling me it looked like a small bean. Upon turning back the foreskin a small cake of smegma was disclosed. Sometimes, when the prepuce is rather tough, ecchymosis may be produced by stretching with forceps, but a little careful attention for a few days on the lines laid down above causes this inconven-

ience to pass away. I think these measures should be carefully tried before any cutting operation is performed. First, because if the simpler measures answer every indication, then the laws of conservative surgery demand that it be performed in preference to the more serious one; secondly, the glans penis is protected from external irritation and kept in better condition by its natural cover.

In talking upon this subject with my eminent friend, Dr. George W. Griffiths, he said that, as another reason for retaining the prepuce, unless imperative necessity demanded its removal, was that he deemed the foreskin as one of the most sensitive parts of the organ and as playing a considerable part in the pleasure of coitus both to the male from its great sensitiveness, and to the female co-respondent in the act by the additional titulation it afforded to her parts. As a last reason I would say that in a majority of cases growth and the use of the organ cause its several parts to dovetail into each other perfectly.

LOUISVILLE.

Reviews and Bibliography.

Syphilis in the Middle Ages and in Modern Times. By DR. F. BURET, Paris, France. Translated from the French with notes by A. H. OHMAN-DUMNESIL, M. D., Professor of Dermatology and Syphilology in the Marion Sims College of Medicine, St. Louis. "Syphilis To-day and Among the Ancients." In Three Volumes. Volumes I and II. 289 pp. Philadelphia: The F. A. Davis Company, publishers.

Slowly truth reaches the light of day. For some reason, while the epidemic that marked the close of the fifteenth century was yet lingering, Astruc, following the popular delusion, ascribed the origin of syphilis to America. This dictum was accepted for centuries, and, although now and then questioned, it was only after the dissemination of the writings of Dr. F. Buret that it began to be formally rejected. The first volume of his "Syphilis To-day and Among the Ancients" was to many satisfactory refutation of the current belief, but some still held out that Buret was mistaken.

This double volume can not fail to settle the matter for good and all. Indeed it is startling in its boldness. Commencing at the top the author shows us how numerous popes, cardinals, and bishops, as well as kings and ministers, suffered or died of syphilis. Among the popes he names Jules II, and Leo X, and Boniface III, as well authenticated cases, and cardinals numerous. Syphilis was, he says, the pretext upon which Cardinal Wolsey

was put to death, he being accused with trying to infect Henry the VIII with his breath.

One on reading this book will no longer wonder that so little has been handed down by medieval writers. It is explained by either supposing that syphilis was too common to be noticed, or that the annalists free from it were too few to record it.

Buret further shows conclusively that the terrible epidemic of so-called leprosy, which induced the establishing of nineteen thousand lazarettos in Europe, was nothing but an aggravated epidemic of syphilis. The work is a monument of learning and a marvel of boldness. D. T. S.

In Sickness and in Health. A Manual of Domestic Medicine and Surgery, Hygiene, Dietetics, and Nursing, dealing in a practical way with the problems relating to the Maintenance of Health, the Prevention and Treatment of Disease, and the Most Effective Aid in Emergencies. By GEORGE WALDO CARY, M. D., FREDERIC S. LEE, M. D., JOSIAH ROYCE, Ph. D., JOSEPH HAMBLÉN SEARS, A. B., SAMUEL T. ARMSTRONG, M. D., Ph. D., ALEXANDER B. JOHNSON, M. D., WILLIAM B. NORTHRUP, M. D., FRANK W. JACKSON, M. D., SAMUEL WALDRON LAMBERT, M. D., FREDERICK PETERSON, M. D., Ph. D., ANNA CAROLINE MAXWELL, and J. WEST ROOSEVELT, M. D., Editors. 921 pp. New York: D. Appleton & Co. 1896.

Every physician who has happened to examine any of the popular treatises on family medicine has doubtless wondered why some one has not undertaken a work that would combine the accuracy of scientific treatises with the simplicity of the popular treatise. In so far as the medical part is concerned this conception has been well carried out in the work under review. In addition, a tone of philosophical inquiry and suggestion runs through the work, which is of decided interest to all whose intellectual bent is in that direction, though often too erudite for the multitudes who can not but find in the work a helpful guide or companion.

If there be such a thing indeed as the amateur doctor, this ought to be his favorite text-book.

The binding is artistic, the print perfect on the best paper; the illustrations are artistic, and the whole book attractive and instructive reading. It is highly worthy of being recommended to the doctor as a dessert to his professional feast, and to the intelligent laity as furnishing a happy insight into the most agreeable parts of medical study. D. T. S.

Archives of Clinical Skiagraphy. Edited by SYDNEY ROWLAND, B. A., Camb. A series of Collotype Illustrations with descriptive text, illustrating applications of the new photography to medicine and surgery. 11 Adam Street, Strand, London, England: The Rebman Publishing Company, limited.

This new applicant for recognition in medical circles may justly lay claim to perfection in the typographical art. It is printed on handsome paper and the illustrations are simply masterly. The editor anticipates that

that have been suggested, those of radiograph, sciograph, and scotograph seem to have met with the most favor, and while I am not aware that a name has yet been suggested that has met with universal approval, it does seem that the title of the work is rather premature in view of the fact that some other and more popular name will ultimately be adopted; secondly, the text of the work is rather incomplete and not sufficiently detailed. These objections, however, are of minor importance and can easily be remedied in the future. The work should certainly meet with the hearty approbation and support of the medical profession, and we have seen no recent publication to which we can so unhesitatingly give our unqualified approval.

H. M. G.

The Laryngoscope. Vol. I, No. I. A Monthly Journal Devoted to Diseases of the Nose, Throat, and Ear, for General Practitioners. Editors, FRANK M. RUMBOLD and M. A. GOLDSTEIN. Subscription price, \$2 per annum. Office of publication, 707 Olive Street, St. Louis, Mo. July, 1896.

This new candidate for professional favor is a handsome octavo of seventy-two pages. The initial number presents six original articles, liberally illustrated by half-tones. These articles are in good style and replete with instructive matter. The editorials and selected matter show the touch of the master hand. The journal is for the use of the general practitioner and seems destined to do "distinctly its full function." We welcome it to our table and exchange list.

The Medical News Visiting List, 1897. Wallet-size, flexible leather cover, pocket, and pencil. Price, in any style, \$1.25. Lea Bros. & Co.: Philadelphia and New York.

This favorite list is now published in four styles: Weekly, dated for thirty patients; monthly, undated, for one hundred and twenty patients per month; perpetual, undated, for thirty patients per week per year, and perpetual, undated, for sixty patients per week per year (without text). The first three styles contain thirty-two pages of text and one hundred and sixty pages of blanks. The sixty-patient style consists of two hundred and fifty-six pages of blanks. No visiting list is lighter, cheaper, prettier, or better fitted to the doctor's use.

The American Year-Book of Medicine and Surgery. Being a yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from journals, monographs, and text-books of the Leading American and Foreign Authors and Investigators. Collected and arranged with critical editorial comments by Dr. J. M. BALDY and twenty-eight assistants, under the general editorial charge of GEORGE M. GOULD, M. D. Profusely illustrated with numerous wood cuts in text and thirty-three handsome half-tone colored plates. 1183 pp. Philadelphia: W. B. Saunders. 1896.

The Tonic Treatment of Syphilis. By E. L. KEYES, A. M., M. D., late Professor of

A Hand-Book of Pathological Anatomy and Histology. With an Introductory Section on Post-Mortem Examinations and the Methods of Preserving and Examining Diseased Tissues. By FRANCIS DELAFIELD, M. D., LL. D., Professor of the Practice of Medicine, College of Physicians and Surgeons, Columbia College, New York, and T. MITCHELL PRUDDEN, M. D., Professor of Pathology and Director of Laboratories, Columbia College. Fifth edition. Illustrated by three hundred and sixty-five wood engravings printed in black and colors. 846 pp. New York: William Wood & Co. 1896.

A Manual of Materia Medica and Pharmacology. Comprising all Organic and Inorganic Drugs which are and have been official in the United States Pharmacopeia, together with important allied species and useful synthetics. Especially designed for students in pharmacy as well as for druggists, pharmacists, and physicians. By DAVID M. R. CULBRITH, Ph. G., M. D., Professor of Botany, Materia-Medica, and Pharmacology in the Maryland College of Pharmacy. With four hundred and forty-five illustrations. 818 pp. Lea Brothers & Co., Philadelphia and New York. 1896.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections, in Photo-Lithochromes from Models in the Museum of the St. Louis Hospital, Paris. With explanatory wood cuts and text. By ERNEST BESNIER, A. FOURNIER, TENNESON, HALLOPEAN, DU CARTEL, HENRI FEULARD, and L. JACQUET. Edited and annotated by J. J. PRINGLE, M. B., F. R. C. P., Assistant Physician to and in charge of the Department for Diseases of the Skin at the Middlesex Hospital, London. Parts 1, 2, 3, and 4. London: The Rebman Publishing Co.; Philadelphia: W. B. Saunders, 1896.

An American Text-Book of Physiology. By HENRY P. BOWDITCH, M. D., JOHN G. CURTIS, M. D., HENRY H. DONALDSON, Ph. D., W. H. HOWELL, M. D., FREDERICK S. LEE, Ph. D., WARREN P. LOMBARD, M. D., GRAHAM LUSK, Ph. D., W. T. PORTER, M. D., EDWARD T. REICHERT, M. D., and HENRY SEWALL, Ph. D., M. D. Edited by WILLIAM H. HOWELL, Ph. D., M. D., Professor of Physiology in the Johns Hopkins University, Baltimore, Md. Fully illustrated. 1052 pp. Price, cloth, \$6.00; sheep, \$7.00; morocco, \$9.00. Philadelphia: W. B. Saunders. 1896.

Deformities. A Treatise on Orthopedic Surgery, Intended for Practitioners and Advanced Students. By A. H. TUBLY, M. S., Lond., F. R. C. S., Eng., Assistant Surgeon and in charge of the Orthopedic Department, Westminster Hospital; Surgeon to the National Orthopedic Hospital, etc. Illustrated with fifteen plates and three hundred and two figures, of which two hundred are original, and by notes of one hundred cases. 598 pp. Price, \$5.50. London: McMillan & Co.; New York: The McMillan Co. 1895.

The Practice of Medicine. By HORATIO C. WOOD, A. M., M. D., LL. D., (Yale) Professor of Therapeutics and Clinical Professor of Nervous Diseases in the University of Pennsylvania, etc., and REGINALD H. FITZ, A. M., M. D., Hervey Professor of the Theory and Practice of Physics in Harvard University, etc. 1088 pp. Philadelphia and London: J. B. Lippincott Company. 1897.

Over the Hookah: The Tales of a Talkative Doctor. By G. FRANK LYDSTON, M. D., Professor of Genito-Urinary Surgery in the Chicago College of Physicians and Surgeons, Professor of Clinical Pathology in the West College, etc.

Foreign Correspondence.

LONDON LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

Health of Troops in India; A Proposed Hospital Reform Association; Sir Richard Quain on Medical Education; The Opening of the Medical Schools—Addresses; Inquests in Public Houses; A Witch Doctor's Methods; Death of Sir B. W. Richardson.

A report just issued on sanitary measures in India for 1894-95 describes the health of the European troops in India during the period as less satisfactory than in the previous years, the daily sick-rate being 5 per 1,000 more, while the death-rate rose from 12.61 to 16.07. The loss by invaliding was 25 per 1,000, bringing the total loss by death and invaliding to 42 per 1,000, or four more than the previous year.

Mr. T. W. Sharpe says it is very gratifying to find the increasing number of blind scholars who are admitted at an early age to the schools for blind and deaf scholars. They are generally the merriest of the merry, and form a marked contrast with the poor children of twelve who have never been trained in some cases even to use their limbs for walking, and have been in most cases made stupid by neglect and harshness.

At a meeting of the Medical Defense Union it was proposed to form a hospital reform association. Dr. Warde Cousins presided, and said that hospital abuse was one of the greatest curses of the medical profession, and if it could not be altogether cured it could be considerably ameliorated. A great many general practitioners agreed with him as to the need of dealing with the question in a practical way. Hospital abuse, especially in the out-patient department, was greater now than it was ever before. It was stated that Dublin stood at the head of the list in respect of that abuse in proportion to population, Liverpool being second, and London third.

Sir Richard Quain gave an address at the opening of the sixty-first council of the General Medical Council. He said, speaking of medical education, that they might look back from the vantage ground on which they now stood to the time when thirty-six months or less were deemed sufficient as a period for acquiring medical education as compared with the present time, when a period of five years has to be devoted to study. They might also look back to the time when an examination in anatomy and surgery lasting one hour was deemed sufficient to give a candidate a right to be placed on the medical register as a qualified practitioner, as compared with the present moment, when examinations extended over several days

and comprised all the educational subjects originally decided upon by the council.

Some interesting speeches were made at the opening of the medical schools at St. George's. Mr. Frost remarked that Edward Jenner, a student at that hospital, introduced vaccination, that it had saved millions of lives and had stood the test of a century. He referred with contempt to the operations of the faddists who were opposed to vaccination, which had resulted in the introduction of a commission which he considered of as much advantage to the community as a commission for the investigation of the laws of gravitation would be. It was a moot question which even a royal commission could not determine, whether, while a man should be allowed control of his children, he should be allowed to carry that control contrary to the public good, which would be just what such control would amount to in the event of it, being optional to accept vaccination.

With regard to the large number of men who entered the ranks of medical studentship who were wholly unfit for the calling, and who would never make good surgeons through being incapable of the necessary manual dexterity, Mr. Frost averred much clumsiness was attributable to the absurdity of being one-handed, which arose from the teaching of children to do every thing with the right hand, a relic of pagan superstition which could not be too soon abolished. Every surgeon would operate better for being ambidexterous, and for some operations, such as those of ophthalmic surgery, it was necessary that he should be so.

Public-house inquests in London have, by the action of the County Council, been reduced considerably in number since 1892, when the public health act came into operation. In that year a large proportion of "crown-ers' 'quests" was held in licensed establishments, but by 1895 the number had been reduced to 438 out of a total of 7,527 that were held, while it is anticipated that by the end of this year such investigations will be lowered to one hundred. The Local Government Board has been inquiring into the subject. Under the public health act the council is required to make proper accommodations for this purpose, and, although considerable difficulty has been experienced, suitable arrangements have been made in a large number of districts, and active measures are being taken for the completion of the work. In thirteen of the sanitary districts of which London consists, special coroner's courts have been provided, in ten districts special courts are being erected or have been arranged for, in seventeen districts suitable public buildings are used for holding inquests, and only three small portions of districts remain without suitable provision. In these last-mentioned cases active measures are still being taken, and, although exceptional difficulties have been experienced, the council hopes to complete the work in the course of next year.

A Cape Colony witch doctor, a Fingo, rejoicing in the name of "Punch," has been committed for trial for contravening the medical ordinance in treating a young girl who claimed to be bewitched by a certain man.

Punch gave the girl certain root decoctions at first, for which he obtained four shillings and a sheep. After more medicine he cut her in various parts of the body in order to let the witch out, in payment for which he accepted a black bull. The girl was rapidly getting worse, when the authorities stepped in and stopped Punch obtaining any more refreshments for medical practice, at least for a time.

Sir B. W. Richardson, the well-known sanitary reformer, died suddenly on November 21st. He was the originator of the *Journal of Public Health*. He was also the inventor of the lethal chamber, now so largely used for subjecting domestic animals to a painless death. Alcohol in relation to its action on man occupied his attention for a considerable time, and he gave the result of his researches before the Society of Arts in the Cantour course of lectures for 1874-75. Sir Benjamin has been president of the Medical Society of London, and has been president no fewer than thirty-two times of the St. Andrew's Medical Graduates' Association. In 1868 six hundred of his medical brethren and fellows in science presented him with a testimonial, consisting of a microscope by Ross and 1,000 guineas. Those who attended the Social Science Congress, held at Brighton in 1875, remember his paper on the "Model City of Health." As president of the Society of Cyclists he took an active part in the development of the cycling pastime. He was knighted in 1893.

The Sir Augustus Harris memorial fund has now reached upward of £2,000. It is proposed to raise sufficient to endow a hospital ward to be named after Sir Augustus, and to be kept for the use of those who have been connected with the theatrical or musical profession.

A strange reason was given to a coroner in the East End by a "vacant looking" man to account for his omission to send for a doctor to attend his mother in her last illness. "I did not go for a medical man," he said, "because I did not want to hasten her end." The coroner's jury returned a general verdict.

LONDON, November, 1896.

PREVENTIVE TREATMENT OF HYDROPHOBIA.—Dr. A. Lagorio informs us that 532 patients have been treated at the Chicago Pasteur Institute since its inauguration July 2, 1890. The patients treated have been divided into three classes: (1) Those bitten by animals recognized and ascertained to be rabid by the control experiment made in the laboratory, or by the deaths of other persons or animals bitten by the same animal (183). (2) Those bitten by animals recognized to be rabid by the symptoms of rabies shown during life (237). (3) Those bitten by animals only suspected to be rabid (112). Only two deaths have been reported, giving a mortality of 0.37 per cent. There were 483 persons bitten by dogs, 24 by cats, 13 by horses, 5 by skunks, 2 by wolves, 1 by a turtle, 1 by a pig, and 2 by hydrophobic human beings.—*Journal American Medical Association*.

Abstracts and Selections.

STRICTURE OF THE RECTUM.—The following case presents some unusual difficulties in treatment, the method of overcoming which may prove instructive.

Mrs. E. S. was referred to me for treatment by Dr. Mercer. She gave a history of having suffered for six or seven years from constipation. She had previously suffered from ulceration of the rectum, which was probably of syphilitic origin, although no history of syphilis could be obtained. About a year and a half ago her uterus, tubes, and ovaries were removed *per vaginam*, partly under the supposition that the constipation she was suffering from was due to the pressure against the rectum of a retroflexed uterus. Her general health improved after the operation and she gained in weight; but the constipation remained unrelieved, in fact steadily increased, so that an evacuation of the bowels was an operation that required all the tact of the patient and all the resources of the *materia medica*.

An examination showed a stricture, caused by a cicatricial deposit on the right anterior portion of the bowel. The stricture was situated about four inches from the anus, too high for the finger to be inserted into it, although by bimanual examination an ill-defined mass could be touched with the tip of the finger. This mass was composed partly of the cicatricial tissue referred to and partly of a fecal accumulation that was lodged above the stricture.

By no manner of means could a bougie, either rectal or urethral, be insinuated through the stricture. An attempt was made, with the aid of a Kelly speculum and headlight illumination, to pass a bougie, but this attempt, like its predecessors, failed.

After all hopes of penetrating the stricture by this means had been abandoned, the only alternative that presented itself was by operative interference, to which the patient readily assented.

In considering the operative procedure to be adopted there seemed but two courses to pursue: first, to attack the stricture directly by a Kraske's operation, or some modification of it; but as this would probably be followed by a fistulous tract, and the subsequent treatment in maintaining the patency of the bowel would be tedious, I decided on the second method, namely, to bring down the sigmoid flexure and form an anastomosis between it and the rectum at a point below the site of the stricture, thus eliminating the diseased portion of the bowel from functioning by diverting the feces from their natural channel. I fully realized that the necessary manipulations would have to be carried on in the deeper portion of the pelvis, but by using the Murphy button the difficulty did not seem to be great.

Accordingly, on April 16th, the patient being in the Trendelenburg position, I opened the abdominal cavity by a median incision and drew the sigmoid flexure out of the wound. A point was then selected where this portion of the bowel could be approximated to the rectum and was opened sufficiently to admit one half of the Murphy button.

An assistant then passed into the rectum the other half of the button, so held by a long pair of forceps that it was adjusted in proper position to the anterior portion of the rectum immediately below the stricture. This part of the button being felt within the pelvis, an attempt was made to incise the rectum immediately over it in order to complete the anastomosis. Before making this incision it was observed, as should have been anticipated, that the cul-de-sac of Douglas had been obliterated, by the previous removal of the uterus, and that the bladder lay in intimate apposition with the anterior wall of the rectum; in fact was so adherent that the separation of the two was impossible. For this reason it was feared that the incision of the rectum might transfix the overlying and adherent bladder, and this is just what happened; the incision over the projecting button permitted the escape of about half an ounce of urine into the pelvic cavity. The bladder wound was immediately sutured, and, as the location of the stricture did not permit of the higher apposition of the button within the rectum, the futility of attempting to complete the anastomosis was apparent.

I was now forced to consider the formation of an artificial anus, but as the patient's consent to this disagreeable operation with its disgusting discomforts had not been obtained, I temporized by closing the opening I had made for the Murphy button in the sigmoid flexure, and then fastening that portion of the bowel to the incised parietal peritoneum in such a manner that it lay immediately beneath the center of the abdominal wound, the latter in turn being closed with the exception of its central portion, which was plugged with iodoform gauze down to the sutured portion of the underlying sigmoid flexure.

On the following day, the situation having been fairly laid before the patient, and her consent to the formation of an artificial anus having been obtained, the iodoform plug was removed, the surface of the exposed bowel was painted with cocaine and opened by removing the sutures of the day before. Through this wound the contents of the bowels found an avenue of escape, and the patient was immediately relieved of a distressing flatus.

On the following day an attempt was made to pass bougies through the stricture by passing them into the bowel at the abdominal opening and then downward into the rectum; this attempt, however, failed. A stout silk thread was then passed into the bowel, one end, however, being fastened by adhesive strips to the skin of the abdomen, and a cathartic administered, in the hope that the string would be carried through the stricture; this also failed; then a string, weighted with a small revolver bullet whittled to the diameter of a slate-pencil, was tried; a cathartic was again administered and we were rewarded by finding, on the following day, the bullet with the attached string, lying immediately above the internal sphincter.

The two ends of the string, one of which projected from the abdominal opening, and the other from the anus, were tied together to prevent the escape of the string from the bowel.

It was now a comparatively easy matter to tie urethral bougies, beginning with the small sizes, to the silken circuit that had been established and draw them up by way of the rectum through the stricture and out of the abdominal opening. By this means, in the course of about ten days, the stricture was gradually dilated so that the largest bougie would readily pass, when rectal bougies were passed in a similar manner. The dilatation of the stricture was materially assisted by the friction and constant opposition of the string against the stricture over which it passed, on account of the flexion of the bowel at an angle, so that the string practically sawed through the stricture.

When the stricture had been dilated so that a bougie about forty mm. in circumference could be passed, it was found that bougies could be passed *per rectum* without the aid of the string. The latter was then removed and the abdominal wound permitted to close. In the mean time formed movements began to pass *per rectum*, and but little escaped from the artificial opening.

On May 22d, six weeks after her admission to the hospital, the patient was discharged, with the instruction to continue the use of the large-sized rectal bougie which she was then using. At this time she had regained her health, the abdominal opening was but a mere sinus and her bowels were moved with but little difficulty.

Seven months later (November 16th,) she reported at the office. At this time she said she was enjoying better health than for many years before; the abdominal sinus had closed soon after leaving the hospital; a large rectal bougie passed with the greatest facility; she rarely required a cathartic to move her bowels; and altogether she was well pleased with her condition.—*Dr. R. W. Stewart, in Medical and Surgical Reporter, September 5, 1896.*

PUNCTURE OF THE LATERAL VENTRICLE.—Von Beck (*La Tribune Médicale*, No. 13, 1896,) reports three cases of puncture of the lateral ventricle.

The first case was that of a boy fourteen years old, who, following diphtheria contracted at the age of seven, suffered from middle-ear disease. This lasted for three years and remained cured for four. The boy was suddenly attacked with pains in the ear, radiating over the right side of the head, vomiting, coma, but no fever. His neck became stiff, general hyperesthesia developed, and the ophthalmoscope demonstrated a neuro-retinitis; the pulse dropped to 54; the right ear-drum was thickened, discolored, but not painful. The mastoid was trephined and found to be markedly sclerosed. The cells were filled with a turbid serum. The transverse sinus and the temporal lobes were exposed; the sinus was intact. There was no pulsation of the brain. Puncture of the temporal lobe gave negative

results. The lateral ventricle was then punctured and seven drams of cerebro-spinal fluid withdrawn. The comatose state disappeared, pulse rose to 80, neuro-retinitis diminished, and the patient felt very well. The tenth day after intervention cephalalgia reappeared, with pains in the teeth. A few days later there was vomiting and coma, and the pulse dropped to 54. The trephine opening was then enlarged, and with an aspirating needle the occipital and frontal lobes were explored, with negative results. A new puncture of the lateral ventricle was then practiced, and two and one half ounces of clear cerebro-spinal fluid withdrawn. The symptoms promptly disappeared, but in ten days again developed, and were accompanied by facial paresis and palpebral ecchymoses. The lateral sinus was again punctured and two and one half ounces of clear cerebro-spinal fluid aspirated. The patient had no further relapses; he left the hospital two months later comparatively well, and has remained so since (two years).

The second case was a boy four years old, who, as a result of a fall, suffered fracture of the frontal bone without paralysis. Three weeks after this accident the child was brought to the hospital with the phenomena of meningitis. There was coma, the pulse was running 120, the neck was stiff; general hyperesthesia, exophthalmos, double retinitis, and high temperature prevailed. Examination showed a comminuted fracture of the right frontal bone, with suppuration extending over the temporal region. The region of fracture was exposed, the dura mater was found torn, and beneath it there was a cortical abscess the size of a pigeon's egg. This was evacuated and drained. All the symptoms were ameliorated, but eight days later symptoms recurred and there was a hernia of the brain. On the eleventh day convulsions developed; on the fifteenth these were renewed and there was loss of consciousness, with left hemiplegia. The lateral ventricle was then punctured and two and one half ounces of turbid cerebro-spinal fluid evacuated. The symptoms promptly lessened in severity and finally disappeared. The patient recovered completely.

The third case was a girl thirteen years old who, in May, 1893, suddenly lost consciousness. Insensibility lasted but a short time, but was followed by severe cephalalgia. Three weeks later there was a second attack. From this time these recurred daily, accompanied by vomiting, vertigo, and cephalalgia. This condition remained stationary until September, 1895, when the acuity of vision of the left eye was diminished. Two months later there was blindness of the right eye. Examination showed nystagmus and double neural retinitis, more marked in the left eye. Tumor of the brain was diagnosed. Iodide of potassium given internally produced no beneficial effect. Osteoplastic resection was made over the left occipital region. As intracerebral pressure seemed especially well marked, the lateral ventricles were punctured. After evacuation of two and one half ounces of cerebro-spinal fluid the cerebellum was explored, but no tumor was found. All the symptoms became better. Twenty days after intervention here was a relapse, followed six days later, in consequence of excitement,

by a loss of sight, high temperature, comatose condition, and an attack of convulsions. The ventricle was again punctured and over seven ounces of cerebro-spinal fluid aspirated. The symptoms again disappeared, and for four weeks the patient remained well. There was then recurrence, which was relieved for the third time by puncture and evacuation of four ounces of liquid. The patient is still under observation.—*Therapeutic Gazette*.

PREPARATIONS OF STROPHANTHUS.—In the American Journal of Pharmacy for July, 1896, Wood and Carter give the results of their studies as to the effects of strophanthin, with the object of determining whether this active principle represents in its action that of the crude drug. They think their experiments are sufficient to show that the commercial strophanthin, as put upon the market by manufacturers of the first class, is an extremely active substance. As long ago as 1888 Rothziegel and Koralzewski reported the results of the use of strophanthin in forty-four cases of disease. The influence of very small doses, 0.0002 to 0.0003 gram, was distinctly perceptible in an increase of the force of the pulse in from five to ten minutes, but usually in cardiac cases the disappearance of the irregularity of the heart's action was not perceived until the second or third day of treatment; when there was dyspnea from cardiac disease the difficulty in breathing disappeared very rapidly. No local irritation was, in their experience, produced by the hypodermic injection of as much as five decilligrams of the strophanthin. They ordinarily gave from one to three milligrams in twenty-four hours; in one case they gave five milligrams for eight days without any bad results. In two cases, however, the daily use of three milligrams for two weeks caused reduction of the pulse rate to forty-eight per minute, without any other accompanying symptoms. They reached the conclusion that strophanthin was a good substitute for tincture of strophanthus.

Wood's and Carter's experiments show that the activity of strophanthin itself is much more marked in raising the arterial pressure than that of the extract, so that confirmation is afforded of the conclusion of Rothziegel and Koralzewski, that is, that strophanthin is a superior preparation of the drug. The authors believe therefore that the pharmacopeia should recognize the active principle of strophanthus and give appropriate tests for its purity.—*Ibid*.

CEREBELLAR TUMOR.—In a recent number of the American Journal of the Medical Sciences Dr. Lloyd, of Philadelphia, records a case of tumor of the cerebellum which is particularly interesting from the fact that operation was decided upon but for accidental reasons was not carried out, and, as was afterward found, if it had been carried out as was proposed it would have been unavailing. The patient was a man, aged thirty-eight years, with a negative family history. He had had syphilis, but denied alcoholism. Seven years before he was seen he had been struck on the occiput with a

piece of grindstone, and after that had been troubled with violent headaches. Five weeks before his admission to hospital his headache became more severe, the pain was shooting in character, and he noticed that his vision was failing. On admission his gait was found to be characteristic of cerebellar disease. There was forced movement of the head and trunk to the right side when he attempted to sit up, and this became more marked when he tried to walk. He was almost completely blind, and there was intense papillitis with five diopters of swelling in the left eye and four in the right. No paralysis of cranial nerves could be discovered except that the right auditory nerve seemed to have its function considerably impaired. There was no difficulty in swallowing, and there seemed to be some mental dullness, with slow speech and vague replies to questions. In discussing the question of an operation it was thought that the exemption of nerve affection pointed to the growth being distinct from the base. There was nothing to indicate one side more than another except the forced movement to the right (which might mean pressure on a cerebellar peduncle on either side) and the remains of the injury to the occipital bone on the right side. So it was determined to operate on the right occiput. However, as has been said, accident prevented the operation from being carried out, and the patient gradually sank and died about two months after admission. At the necropsy there was found a tumor on the under surface of the cerebellum on the right side, lying between the pons and medulla on the one hand and the right lobe of the cerebellum on the other. The growth sprang from the middle cerebellar peduncle and the posterior part of it was cystic. The under surface of the right lobe of the cerebellum was excavated and had assumed a cystic character. Undoubtedly the absence of impairment of the functions of the cranial nerves in this case is very remarkable, and it is also interesting that the forced movements were toward the side of the lesion and not, as in most cases, away from it. Dr. Lloyd is of opinion that surgical interference in cases of cerebellar tumor must be largely experimental and is always most hazardous. He thinks that operation in this particular case would have been inevitably fatal. The difficulty of localization must always be great, and the technical difficulties he thinks are such as will frequently baffle the best and most self-possessed surgeons.—*Lancet*.

COLD BATH IN THE TREATMENT OF PNEUMONIA IN CHILDREN.—In an interesting pamphlet on the use of the cold bath in the treatment of pneumonia in children Dr. Buxbaum, assistant to Professor Winternitz, recommends that attention should be directed to the weakness of the heart, the disturbance of the nervous system, and the congestion and hyperemia of the lungs; at the beginning of the illness the hyperemia of the lungs is active, and during the progress of the case it is passive. The hyperpyrexia rarely requires energetic treatment, and in asthenic conditions a reduction of temperature may even be contra-indicated. Dr. Buxbaum employs baths at a temperature of from 18° to 22° C. (from 64° to 72° F.), combined with

cold douches, whereby the fever is diminished. Children present but little resistance to reduction of temperature, and the decrease sometimes amounts to 3° C. after the bath. As a precaution against collapse the bath ought not to last longer than five minutes and is on no account to be continued if the child shows signs of shivering. The improvement of the respiration during the bath is a favorable symptom; the heart's action is strengthened, the resistance in the peripheral parts of the circulation is diminished by the dilatation of the vessels of the skin, and the right ventricle, which is especially endangered, is thereby relieved. According to Romberg the influence of the vaso-motors is of great importance in disease of the respiratory tract, and the obstruction of the circulation is due to paresis of the vaso-motors caused by the pneumococcus. Dr. Buxbaum mentioned the case of a child who had developed whooping cough two months previously and whose respiratory tract was to all appearances seriously involved. The child was emaciated, the skin was dry and cyanotic, the respirations were irregular (amounting to about 52 per minute), and examination of the chest showed that there was broncho-pneumonia. Dr. Buxbaum ordered a bath at 20° C. with douches and rubbing for three minutes, after which the respiration became regular and the pulse stronger. The bath was repeated twice a day, and at the end of two days the pulmonary dullness disappeared, only moist, coarse crepitation remaining.—*Ibid.*

A CRETIN TREATED BY THYROID EXTRACT.—Wm. Rushton Parker, in *British Medical Journal*, 1896, says: M. E. K. was born on March 1, 1888, her mother—who suffers from hare-lip and cleft palate—having two months previously suffered a great shock from the rapid death of one of her boys from croup. Otherwise there is nothing noteworthy in the family history—no goitre, no consanguinity, and the four grandparents living to a good age. During infancy it was noticed that she differed from other children in being always very still and quiet, in sleeping inordinately, and in never crying. Up to six and a half years of age she remained very stunted in growth, propped up all day on a chair, being unable to sit up or stand, usually very stolid, and sleeping indefinitely, breathing very noisily, and unable to recognize people or to speak. She was always cold, liking to be near the fire. Her actions were very slow, so that she would take a full minute to raise her arm when asked to shake hands. Her face was swollen, so that her eyes were often scarcely visible; her lips were swollen and livid; her tongue was swollen and livid, and commonly protruding; the teeth were black and stumpy; the mouth seemed always full of phlegm; the bridge of the nose was sunken, and the tip flat; the neck was thick, the thyroid gland quite imperceptible; there were soft swellings above the collar bones, and similar masses outside the nipples; the limbs were short and stumpy, the belly was swollen, and an umbilical hernia protuded to the size of a walnut. The hair of the head was not noticeably scanty or coarse.

A five-grain thyroid tabloid was given every week-day in one dose for the succeeding six months, during which time the swelling gradually vanished

from the tongue, then from the face, then from the body and limbs, so that in a few months her mother thought she felt quite a stone lighter, although she had grown some inches in height.

On November 28th, after twelve months' treatment, she had very much the appearance of any healthy child from two to three years of age, but being unable to talk—with the exception of saying a very few simple words—and having several healthy permanent incisors, most of the old, black, stumpy teeth having vanished.

The thyroid treatment caused no unpleasant symptoms whatever, so that it was never discontinued or the dose reduced; but the impression throughout has been that the child was taking just about as much as it could tolerate, being occasionally on the verge of diarrhea and feverishness.

THE NURSING OF CHILDREN.—It is the common experience of practitioners that it is more difficult to obtain satisfactory nurses for children than for almost any other class of patients. This is due partly to the fact that the training of nurses in the care of children has been much neglected, and partly to the obstacles which lie in the way of furnishing such training.

Young children are not received into most general hospitals. If the hospital contains maternity wards the infants are discharged with their mothers after two weeks. The nurses therefore gain but little experience in the care of young children. In most infants' and children's hospitals the nurses obtain no experience whatever in the care of adults. They can not therefore be graduated as well-qualified general nurses. Hence the standard of the nurses in such institutions is not, as a rule, as high as that of general hospitals. When a nurse has spent two years in a hospital, if she is personally adapted to the work, she at once engages in profitable private nursing, or secures a responsible position in some hospital or institution. Hence, the better class of trained nurses rarely enter a children's hospital for farther training. It is clear that it is only from those hospitals which receive both children and adults that we can expect well-trained general nurses who are also trained in the care and feeding of infants.

The nursing problem has become a serious one in many children's hospitals. In some cases the conditions have been such that it could be easily settled, and several hospitals have worked out schemes peculiar to themselves. When two hospitals, a children's and an adults', are so situated that both can be placed under one management as regards nursing, the problem is easy. It is very easy in a general hospital having children's wards, but in most isolated infants' hospitals the problem is very difficult, and many serious obstacles arise which are not apparent at first sight.

Some of these difficulties are certain to present themselves at every attempt to improve the nursing in such a hospital. A sufficient number of trained nurses can not be found who will enter the special hospital for the primary object of training. Few institutions are able to pay the large price expected and obtained by trained nurses, which would be required to

enable it to secure a sufficient number for its needs, if the object of the nurses were remuneration solely. As no experience in the care of adults can be offered, such a hospital can not give diplomas to its graduates as competent general nurses, hence the standard of those who apply is not sufficiently high to warrant the establishing of a special training-school.

Most hospitals have settled the question by employing a limited number of competent supervising nurses, usually those who have been trained in some general hospital, and placing under them a number of women or girls as ward nurses, who have the immediate personal care of the children. In most children's hospitals each ward contains a number of mothers who are of certain value as care-takers. By close supervision and training of the ward nurses this arrangement usually proves fairly satisfactory, and has seemed to be the best available in many cases. It fails, however, to properly utilize the valuable material of the hospital for the training of nurses for private duty among children, and limits its scope of usefulness.—*Floyd M. Crandall, M. D., Archives of Pediatrics.*

PARAPLEGIA IN PERNICIOUS ANEMIA.—At the recent meeting of the American Neurological Association Dr. C. Eugene Riggs reported the case of a woman, aged forty-five years, who had become paraplegic after a severe nervous shock three years previously to coming under observation. There was impaired sensibility in the lower limbs and on the trunk as high as the ensiform cartilage, and a spastic condition of the legs with exaggeration of the knee-jerks, with rectus clonus. There was neither ataxy nor shooting pain. There was very marked reduction both in the number of corpuscles and the quantity of hemoglobin, and the patient presented an appearance of extreme pallor without marked emaciation. There was apparently a gradual failure of strength, and finally death took place. At the necropsy the thorax, abdomen, and pericardium were found to contain a large quantity of serum, the heart was pale and flabby, and the liver and the spleen were enlarged. Within the spinal canal in the mid-dorsal region there was found a considerable extravasation of blood, with apparently some serous effusion as well. The cord on being hardened was found to present very extensive degeneration, affecting the anterior pyramidal tract, the direct cerebellar tract, the crossed pyramidal tract, Lissauer's tract, and the posterior columns. This degeneration was most marked at the sixth dorsal and third cervical segments, but extended from the first cervical to the fifth lumbar. There seemed to be no direct relation of the degenerated areas to the extravasation of blood. The two points in which this case seems to differ from other cases of degeneration of the spinal cord associated with anemia are the facts that there apparently was hemorrhage into the spinal canal and that Lissauer's tract was affected. The latter is unusual in this variety of sclerosis (if it is a separate variety), and, although hemorrhages in the retinae and in other parts occur in the course of pernicious anemia, hemorrhage into the spinal canal is very rare if not actually unique. *Lancet.*

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNĀ."

Vol. 22.

SATURDAY, DECEMBER 26, 1896.

No. 13.

D. W. YANDELL, M. D., LL.D., and H. A. COTTELL, M. D., Editors.

JOHN L. HOWARD, M. D., Assistant Editor.

A Journal of Medicine and Surgery, published every other Saturday. Price, \$3 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The editors are not responsible for the views of contributors.

Books for review, and all communications relating to the columns of the journal, should be addressed to the Editors of THE AMERICAN PRACTITIONER AND NEWS, Louisville, Ky.

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JOHN P. MORTON & COMPANY, Louisville, Ky.

ANTIPYRINE IN THE TREATMENT OF WHOOPING COUGH.

Antipyrine, being the most manageable of the coal-tar derivatives, has steadily kept to the front in therapeutics in spite of popular abuse, quack medicine appropriation, and professional opposition. Ten or more years ago it was the antipyretic *par excellence*, and the favorite analgesic of the best physicians, and we believe, had it not been for its very injudicious use in the first year of our recent pandemic of *la grippe*, it would to-day be in the lead of the synthetic drugs of its class.

As an antipyretic and analgesic it seems to have been superseded by acetanilid, phenacetin, and lactophenin, and perhaps justly; but it is doubtful if any drug will ever successfully compete with it in its comparatively new rôle as an antispasmodic. There can be no question of its real value here, as its efficacy in the gastro-intestinal reflex spasms of infancy and in strychnine poisoning abundantly attests, while the readiness with which it lends itself to hypodermic use makes it as manageable as the soluble salts of the alkaloids.

Under these considerations it was expected that antipyrine would be a valuable remedy in whooping cough, and the reports indicate that expectation will not be disappointed.

In the *Gazette hebdomadaire de Medicin et de Chirurgie*, for October 22d, M. Le Goff* sums up the results obtained by many observers with this treatment:

Dubosquet-Laborderie employed it in three hundred cases, in which a hundred and ninety-six patients were cured or benefited. The average duration of the treatment was thirty-five days. The amounts given daily varied from five to fifteen grains for children up to three years of age, and from thirty to sixty grains for older children and adults. The same results were observed by Geffrier, De La Jarrige, Jasiewicz, and others. Richardiere also employed antipyrine with satisfactory results. It diminished the number of coughing attacks one third in the majority of cases, although it never suppressed them completely. In two cases in which the patients vomited profusely it had no effect on the vomiting. He concluded, however, that antipyrine exerted a positive action, but that it was not superior to that of belladonna.

Whenever the renal functions are not impaired, says the author, M. Lemoine prefers this medication to any other, as its action is surer and more rapid. To small children he gives from four to eight grains in enemata every twenty-four hours, and to children from three to six years of age and older, twenty-four grains in six doses.

Von Genser enumerated the results obtained by him in two hundred cases, in which he employed two methods of treatment: Insufflation of powdered medicaments into the nasal fossæ, and antipyrine administered by the stomach. With the first method few results were obtained, and the duration of the treatment was at least forty-three days; in the second the results were more conclusive. Administered in quantities of two grains a day for each year of the child's age, antipyrine always diminished the number of coughing attacks and lessened their violence. Recovery was obtained in twenty-four days, and from this the author concluded that antipyrine shortened the duration of the disease. Many other instances are cited by M. Le Goff to demonstrate the efficacy of this treatment.

In regard to its mode of action he says the drug is essentially a nerveine and acts as an analgesic and as an antispasmodic. By diminishing the irritability of the superior laryngeal nerve, which by reflex produces the cough, it arrests the attacks of coughing and prevents serious symptoms which the intensity of the attack may cause. This action on the nervous element of the cough is the least disputed of the effects of antipyrine in whooping cough, and was observed by M. Le Goff himself in eighteen patients, in seventeen of whom the number of attacks and their intensity diminished considerably, and in nine recovery occurred in less than twenty-five days, thus cutting short the duration of the disease very much.

In the second place antipyrine is an antiseptic. Brouardel and Loye have shown that it is antizymotic. A five-per-cent solution hinders the devel-

*New York Medical Journal, November 14, 1896.

opment of microbes and attenuates their virulence; furthermore, its action has been manifested as well in laboratory experiments.

Concerning its action on the catarrhal element of this disease, says the author, Mouvet affirms that if it was given in the first stage of the affection it arrested the catarrh; Soula also observed similar results. M. Le Goff himself administered antipyrine to a patient during the first stage of the disease, and not only the attacks of coughing but the catarrh disappeared in seven days. In his other patients he remarked that the catarrh disappeared under the influence of this treatment more rapidly than is ordinarily the case after the cessation of the attacks, and on this point he is corroborated by other observers.

M. Le Goff states that the only symptom he has observed to follow the use of antipyrine is albuminuria, which appeared in two cases; it disappeared, however, rapidly after the cessation of the use of the drug and the establishment of a milk diet. Concerning its elimination he says many physiological experiments and the majority of clinical observations demonstrate that it is eliminated well in animals and in persons with healthy kidneys; children, particularly, eliminate it easily. It has been said that antipyrine causes various eruptions; but they are not always followed by injurious consequences, and they disappear after the suspension of the drug. Cordes, Taylor, Dubosquet-Laborde, and others, cite instances to show it causes nausea, vomiting with epigastric pains, and anorexia. It is not known, says M. Le Goff, whether these symptoms are to be imputed to any impurities in the drug, to an excess of action, or to peculiar individual susceptibilities. M. Dubosquet-Laborde thinks that the former play a certain part in giving rise to the symptoms observed. However, says M. Le Goff, the benignity of these symptoms is sufficiently assured, and we need not fear to give antipyrine even in large doses. It is prudent, however, to watch the elimination carefully, and before giving the drug to ascertain the condition of the renal filter.

In order to prevent any injurious action on the digestive tract the drug is given in Vichy water, as follows:

℞ Antipyrine,	15 grains;	
Gooseberry syrup,	300 "	
Vichy water,	2.5 ounces.	M.

This quantity is to be taken in twenty-four hours, a dessertspoonful after each coughing attack. Besides this, M. Le Goff recommends the injection of milk or bouillon after each dose of the solution, as the antipyrine is thus very well tolerated.

Notes and Queries.

THE ABSORPTION OF IRON PREPARATIONS.—It is a now generally accepted fact that inorganic iron preparations are practically worthless in blood therapeutics, while organic compounds exert varying effects in the ratio to their absorbability. The albuminate preparations have a certain degree of value because they supply in loose combination the components from which the system can compound the required form of iron, just as it is abstracted from all food. This natural form of iron, as it is found in the tissues, and particularly in the liver, where it "comprises the reserve store for blood formation," is ferratin, as substantiated by the studies of Schmiedeberg, Marfori, and Filippi, and confirmed by other equally high authorities, including Prof. Chittenden, of Yale.

These investigators have proved that ferratin is present in all human organisms, that it is absorbed from animal and vegetable food, and is stored principally in the liver "to feed the blood." When, therefore, the physician treats his anemic patient with carefully selected diet, exercise, hygienic measures, etc., he unconsciously enlists the aid of the digestive and other organs to manufacture the required ferratin from the ingested; this is a laborious task, because the organs are weak, and it is empirical practice, because there is too much uncertainty in trusting to the debilitated system to work its own recovery, even if useless inorganic iron preparations are added.

Schmiedeberg and Marfori, having proved the identity and function of ferratin by conclusive physiological tests, which facts are now incorporated in text-books and medical literature, proceeded to duplicate natural ferratin by a synthetic process in order to make the product available for therapeutic use; they succeeded in combining tartrate of iron with albumin by a complicated chemical process, yielding an iron albuminic acid, or ferratin. This product is chemically and physically identical with the natural ferratin, as it can be precipitated from pigs' liver (containing the highest percentage of ferratin among animal food) or spinach (highest percentage among vegetables), and further physiological and clinical tests have proved that this product is quickly absorbed and assimilated, supplying the requisite amount of iron to the blood without taxing the system, and increasing the appetite and quickly stimulating the vital power.

There is nothing vague about the claims for ferratin. It is a logical, scientific agent, designed on careful consecutive investigations by the highest international authority; and it has clinically redeemed every promise made for it by increasing blood corpuscles and hemoglobin, improving appetite and general well-being, and markedly increasing body weight.

Sajous' Annual for 1895 quotes the unqualified clinical tests and indorsements of ferratin of such authorities (in addition to the authors of the product, Schmiedeberg and Marfori,) as German Sée, Jaquet, Banholzer, John Harold, and Hugo Wiener, the foremost therapeutists of Germany, Italy, France, England, and Austria. In America ferratin has been indorsed in print by Einhorn, of New York, Fackler, of Cincinnati, Chittenden, of New Haven, Perekhan, of Chicago, Spencer, of Cleveland, and verbally or in practice by hundreds of the foremost practitioners in all parts of the United States.

There are many iron compounds and blood tonics, all clamoring for preference; none has the scientific status, based on physiological investigation and proof, and indorsed on clinical records by authorities of highest rank and unquestioned sincerity, as possessed by ferratin and duly recorded in all standard text- and reference-books of recent issue.

THE ROUT OF THE ANTIVACCINATIONISTS.—The report just issued by the committee appointed by the Board of Guardians to investigate the circumstances attending the recent epidemic of smallpox in Gloucester, England, closes, we trust, an episode which has been most instructive and convincing. As the report stands, it is overwhelmingly against the anti-vaccinationists, both verbally and statistically, and upon them must fall the tremendous responsibility of 441 deaths from the scourge.

In the year 1887 the Board of Guardians voted by a bare majority of two to give up compulsory vaccination. In the course of the recent epidemic, nine years later, 2,036 were attacked by smallpox, and of these 21.7 per cent died; 40.5 per cent of the deaths were among the unvaccinated, and 9.2 per cent among the vaccinated; but the most significant fact is that in no instance among the latter (the vaccinated) had the individual been reinoculated during the past ten years, demonstrating incontrovertibly the necessity of revaccination, a question which has not received the attention which is its due. Numerous instances are given of the infection of one or more unvaccinated members of families or of bodies of public servants, while those recently vaccinated escaped to a man. Furthermore, there are given important examples of the power of prompt revaccination to stay the epidemic when it had already invaded families and large public institutions. In fact no one but the most stubbornly opinionated could fail to be convinced by the testimony adduced in the investigation.

Two of the main arguments of those opposed to compulsory vaccination have been completely disproved in the Gloucester experience—first, that isolation is an efficient and preferable means of prevention. Isolation was indeed found to be powerless to arrest the progress of the infection. Again, it had been held that if vaccination were not compulsory it would not arouse opposition, and people would voluntarily seek it; but even in the face of the epidemic many refused to so protect themselves and their families until municipal pressure was brought to bear upon them.

Enough years have now passed to allow a generation to arise who have forgotten the frightful ravages of this loathsome disease in unvaccinated communities, and some such wholesale sacrifices as that at Gloucester must be made before some will be convinced of the necessity of protective inoculation. The outcome of this epidemic demonstrates conclusively the necessity of general vaccination—voluntary, if that be sufficient, but compulsory if need be. It also demonstrates the folly of allowing a few visionaries and oppositionists to act contrary to established sanitary principles, thereby endangering not only their own lives, which may be of little consequence, but also those of their blind followers and of the community at large. The State has a right to constrain or remove those suffering from such infectious diseases. If it can be clearly demonstrated, as in the case of smallpox, that prophylactic measures will effectually prevent the development and extension of contagion, by all means let the ignorant and the unreasoning be constrained to submit to such simple measures as shall contribute to the safety of the great majority.—*American Medico-Surgical Bulletin.*

MORTALITY OF THE NEGRO.—While the negro is especially immune to some diseases, he seems particularly susceptible to those diseases which are more universally prevalent. He is also more affected by environment and other conditions than the white under the same circumstances. The difference is likely due largely to ignorance.

Dr. G. W. Hubbard, in comparing the condition of the negro as a slave and as free at the present time, reviews in the Medical and Surgical Reporter truths which are apparent to all observant physicians, especially to those who practice in cities where the negro is an element in the population.

He, in common with many other physicians, has noticed that pulmonary consumption was comparatively rare among the slave population, and some even maintained that it was unknown as a disease in that race, but from about the year 1855 up to the present time this disease has made greater and greater inroads into that race until it seems a wonder that so many still live.

According to the census of the large southern cities, the mortality from consumption among the blacks was from fifty to one hundred per cent higher than in the whites. In Baltimore the returns of the Health Office will show that the blacks have a mortality about double that of the whites. This is probably greater, too, than recorded, for many cases, especially when dying without medical attendance, are not always put down to consumption. Those of pure African descent are less susceptible to this disease than the mixed race.

Of course it is easy to see that ignorance of the proper way of living, unhygienic surroundings, insufficient and improper food, and many other causes all tend to bring out pulmonary consumption in those who have the slightest tendency to it, and certainly arouse it in those born without a pre-

disposition or inherited taint. It is very evident that this race is kept up by a large birth-rate, which, as a rule, is unrecorded in the vital statistics.

Hygienists have attempted with little success to show these people how to live and how to avoid disease, but lack of money and often lack of intelligence prevent a practical application of any sanitary rules. It would be hard to convince any one visiting such a city as Washington, for example, that the negro race is dying out, but that death plays havoc with the poor of this race is well known to all.

Probably on the principle of the survival of the fittest, the hardiest of them will live and procreate; but until their intelligence reaches a higher grade and until the sanitary police have more power this high rate of mortality will affect this race and also indirectly the white race.

When a disease like pulmonary consumption slowly eats its way into any body of persons the process is so gradual that no alarm is felt, and steps for checking the disease are not taken or are not heeded. But let a great epidemic come along and sweep away many in a short space of time, and then sanitation will have full sway.

An epidemic of a fatal disease does more for the cause of hygiene than a disease which is always with us and is familiar to us in all its details. A cholera scare is not without its advantages.

MUSHROOM POISONING.—One of our Paris contemporaries, the *Progrès Médical*, sounds a timely note of warning against trusting to the "instinct" of persons who, having no scientific knowledge of the subject, profess to be able to distinguish unerringly between the edible and the poisonous fungi. It seems that an unusually large number of cases of toadstool poisoning occurred in various parts of France during the month of September, and among them, and singularly emphasizing the *Progrès'* caution, was the death of a man and his wife who for more than fifty years had dealt in mushrooms. Three cats that had eaten these persons' dejecta died also.

Our contemporary speculates as to whether or not the storms that are so apt to occur in the early part of September make the poisonous fungi particularly dangerous at that time. It remarks that the plants of tropical regions have an activity of secretion quite different from that possessed by the same plants growing in temperate districts. However that may be, says the French journal, the ordinary tests to distinguish the edible from the poisonous fungi, such as the odor, the taste, and observing whether or not they blacken a silver spoon in the cooking, are not to be trusted; it is only the botanical characteristics that can be relied on. Besides, the writer continues, it is not true that poisonous species become harmless on boiling, expression of the juice, or maceration. In the public markets, especially in Paris, only the innocent species, those that are the most commonly cultivated, are to be found, but many amateur cultivators of fungi are given to raising species that not all of them are able to distinguish from various poisonous species of *amanita*.

The frequency with which fatal cases of mushroom poisoning are reported at the time of the year mentioned, that of the early rains and the first mushrooms, the article goes on to say, shows how cautious one should be in the tentative consumption of fungi that grow wild in the meadows and woods; persons who imprudently trust themselves to select edible mushrooms, relying on their instinct in the absence of scientific information, expose themselves to terrible dangers.

The *Progrès* tells of an excellent plan that occurred to a pharmacist in one of the regions in which the accidents in question had happened. He put specimens of the poisonous mushrooms of the neighborhood into preserve jars and kept them on view in his show-window, so that persons passing his shop could learn a most instructive object lesson if they were willing to stop for an instant. This pharmacist must be a most benevolent man, but not every community can rely on having his like. In this country, fortunately, the government publications give ample means of distinguishing the edible from the poisonous among fungi, and mushrooms unexcelled in flavor and nutritive value grow in the United States.—*New York Med. Jour.*

THE PHONENDOSCOPE.—The newly invented phonendoscope is designed to be used by physicians and surgeons for detecting the presence of disease by sound. The instrument consists of a circular flat metal box or tympanum, having on its one surface two apertures for the attachment of the rubber ear-tubes, while the other surface is formed by a thin disk which is readily thrown into vibration. The best results are obtained by simply applying this disk to the surface to be examined. By an ingenious contrivance a second disk can be superposed upon this one and a vulcanite rod attached to the former, so that the area of auscultation may be extremely circumscribed. The conduction of the sounds is only slightly diminished by the use of this rod, which thus combines the principle of the solid stethoscope with that of the tympanum. The rod furnished with the instrument is about two inches in length, but it is stated that there are other rods of various lengths, to enable the "phonendoscopist" to receive sound vibrations of the natural cavities which communicate with the exterior of the body. It is useful as an aid to auscultation, and yet not likely to entirely supersede the use of the stethoscope. It may also be found useful in class demonstration, since it would be easy by means of branched tubes to enable several persons to listen at the same time. The instrument will be particularly useful for the following purposes: In auscultation of the sound of the respiratory organs, in the circulation of the blood, and of the digestive organs in the healthy body as well as in the sick; the sounds made by the muscles, joints, and bones; the sound of the capillary circulation; the slightest sounds produced in any diseased condition of the body; hence it is possible to draw on the body dimensions, the position, or any alteration in the position of the various organs, and of the fluids which have gathered in the most important cavities in the body.—*Popular Science News.*

THE DECUSSATION OF THE OPTIC NERVES.—In the last number of the *Neurologisches Centralblatt* there is an important preliminary communication on this subject from Dr. L. Jacobsohn, of Berlin. He refers to the contention of Kölliker, at the recent Anatomical Congress at Berlin, that in mammals and also in man there is a complete crossing of the optic nerves at the chiasma, a view which Michael formerly advocated against that of Gudden, who held that in mammals a semi-decussation took place at the chiasma. Dr. Jacobsohn used in his researches Marchi's method, by which a degenerated fiber can be traced clearly from the point of section onward, and his method of experiment was to extirpate one eye and kill the animal a few weeks later, when the degeneration could be easily traced. As the fibers of the optic nerve run without interruption from the retina to the corpus geniculatum it was obviously easy to trace degenerated fibers both in the chiasma and in the optic tract, and so to determine whether the fibers from the extirpated eye all ran on one side or whether some crossed. Rabbits, guinea-pigs, cats, and monkeys were used for experiment. In the rabbits and guinea-pigs no degenerated fibers could be traced through the chiasma to the tract of the same side. All apparently crossed to the tract of the opposite side. But in cats and monkeys, on the other hand, there was a considerable number of fibers to be traced into the optic tract on the same side as the extirpated eye, clearly showing that in these animals the crossing at the chiasma was only an imperfect one. There is, of course, a presumption that a similar arrangement holds in man, and the writer in a note added after his paper was written calls attention to a case shown by Schmidt-Rimpler, at the recent Ophthalmological Congress at Heidelberg, in which such an arrangement was demonstrable. A complete account of the results of Dr. Jacobsohn's research will be eagerly looked for, and in the mean time he is to be congratulated on the successful and highly interesting result of his experiments in reference to the decussation.—*Lancet*.

EGYPT AS A FIELD FOR HELMINTHOLOGICAL STUDIES.—The publication in the third volume of the *Memoires de l'Institut Egyptien* of the first part of an important helminthological work by Prof. Sonsino, of Pisa, entitled "Contributo alla Entozoologia d'Egitto," brings once more into notice the unique opportunities afforded by Egypt for the study of helminthology not only as a science but as a highly important practical element in tropical pathology and hygiene. Dr. Sonsino points out what a marvelously rich field Egypt is for this purpose. The peculiar conditions under which the natives live, the poverty of the masses, the squalid villages, the crowded, dirty towns, the impure water supply, the almost universal ignorance of the rudiments of hygiene, the favorable climatic conditions, all have contributed to people the intestinal canal, the liver, the lymphatics, and the blood even of the unfortunate fellaheen with an abundant fauna. There is a double interest in this for the sanitarian. The parasites themselves are in many instances dangerous, as in the case of bilharzia, of ankylostoma duodenale,

of the *filariæ sanguinis*; but not only are these parasites directly dangerous, but by weakening the resisting powers of the organs they occupy, as well as by impairing the general health, they predispose to other more acute and graver diseases, such as cholera, typhoid, and dysentery. Many helminthologists have worked well and successfully in this Egyptian field, none more so than Dr. Sonsino himself, but, as he points out, notwithstanding the vast amount of work already accomplished, there still remain many problems to be solved. Fifty per cent of all Egyptians are the subjects of bilharzia infection; this represents an enormous amount of suffering and indirect mortality. Seventy-five per cent at least are the subjects of ankylostoma infection; this represents an enormous amount of debility, dyspepsia, anemia, and mortality. Dr. Sandwith says the ankylostoma is sapping the vitality of the Egyptians. Probably ten per cent of Egyptians harbor *filaria nocturna*; and this, too, means much suffering and much hideous deformity. Yet nothing is known of the life-history of bilharzia, and there are many problems in the life-history of the ankylostoma and of the *filaria sanguinis* to be worked out, the solution of which would very likely enable the sanitarian to indicate a rational and efficient prophylaxis. We think that no greater boon could be conferred by Great Britain on the Egyptians than the solution of these and similar helminthological problems, the people being at the same time taught to apply the prophylactic measures indicated by helminthology. It seems to us that bacteriological research is not every thing in pathology, that in the study of parasitic forms higher in the scale of life than the bacteria there lie important and much neglected fields for investigation involving in many countries great practical issues. We think that some of the funds now devoted to the establishment of bacteriological laboratories in Egypt might very well, and with great advantage to science, be devoted to those helminthological investigations for which that country offers such splendid opportunities. Bacteria can be studied better in the fully equipped laboratories of Europe than in the necessarily imperfect establishments of Egypt; not so the animal parasites, which can be satisfactorily studied only on the spot.—*British Medical Journal*.

SMOKE AND SUNLIGHT.—The feature of the opening session of the Congress of the British Institute of Public Health at Glasgow was a paper by Prof. W. Ramsey, of University College, London, on the importance of sunlight as a factor in the purification of the air and the destruction of bacteria. All of them, Prof. Ramsey observed, were guilty of folly when they burned in their fires fuel which produced smoke. This was one of the most pressing problems of our age. The disposal of refuse and the supply of water had been carefully considered, and difficulties had in a great measure been overcome, but they had not yet touched the fringe of the great pall which hung over the cities shutting out the sunlight, and which, while it was an enemy to cleanliness, was also a supporter of disease. Smoke deposited in our houses, on our clothes, and on our persons "blacks," necessitating a

great expenditure of labor and of soap. It condensed atmospheric vapor, causing fog and rain, rendered our climate colder, and made our lives more or less unhappy and uncomfortable. It shut out sunlight and thus increased the growth and tended toward the multiplication of bacteria. Much was done nowadays to promote the burning of smokeless coal in our factories by mechanical stokers, but he was afraid that little inducement could be held out to the manufacturer in endeavoring to persuade him that a saving could be effected by burning fuel without smoke. Prof. Ramsey's remedy for the evil of smoke was for people to burn coke, which gave out, weight for weight, a greater amount of heat than coal, and emitted no smoke. In Paris it was the universal fuel, but it was there burned in stoves, where the glow could be seen only through windows of mica, and though heat radiated through mica much more readily than through glass, yet the heat was produced mostly by the heating of the air of the room owing to the contact with the hot iron of the stove. Coke was easily set on fire by a proper arrangement of gas jets. Could they induce the dense population in the cities to adopt coke fires, the smoke nuisance would be greatly abated. Paris was a larger city than Glasgow, and yet it was clean and bright, while Glasgow was dark and dirty, and the difference was almost entirely due to the fuel burned. The question was, how could legislation be brought so to bear as to produce the required result? Corporations already possessed powers to check the emission of unreasonable quantities of smoke from any chimney, domestic or factory. Their power turned merely on the word "unreasonable." If they agreed that all smoke was unreasonable, then their powers were sufficient. If householders were warned by the police that they would be fined if they emitted more than a minimum amount of smoke, they might trust the public would take the line of least resistance, and as coke was burned it would become more and more easy to compel recalcitrant conservatives to act for the public good.—*Ibid.*

RABINSCHER'S METHOD OF TREATING WHOOPING COUGH.—In the *Lyon Médical* for October 11th there is an abstract of an article from the *Bulletin Médical de Paris* for September 13th, in which the writer says that this method consists in the introduction into the back of the mouth of a small tampon of cotton saturated with a one-to-one-thousand solution of corrosive sublimate, and pressing it against the lower part of the tongue in such a way that the liquid will bathe the epiglottis and the neighboring mucous membrane. This method, with which the author has obtained good results, was applied in seventy-one cases of whooping cough by Dr. Rocco Gentile; thirty-five patients were cured after from three to twelve applications; thirteen were considerably ameliorated, and the others interrupted the treatment or complications supervened which did not depend upon the whooping cough.

One of the greatest benefits to be derived from this treatment is the rapid cessation of the vomiting which contributes so much to weaken the

patients, who lend themselves very readily to the treatment and become rapidly accustomed to the introduction of the tampon.

Gentile has never employed more than one application a day. In a very small number of cases he has observed temporary disturbances, such as hemorrhages of the conjunctiva and of the ear, buccal ulcerations, and slight fever; but these complications are not serious; in fact children tolerate mercury easily.—*New York Medical Journal*.

THE DIFFERENCE DEFINED.—The Bauble publishes the following verses:

RONDEAU.

"I can't conceive," she archly cried,
 "Wherein you men can longer pride
 Yourselves from female rivals free,
 For surely we have grown to be
 Your peers in ev'ry human stride.
 It is a truth that none dare hide;
 Yet why you men will not agree
 To recognize the new decree,
 I can't conceive.

"Now, *entre nous*, won't you confide
 And tell me true, all jokes aside,
 What difference the world can see
 Between your manly self and me?"
 "To tell you truly," he replied,
 "I can't conceive."

THE EARLIEST HUMAN OVUM.—At the recent meeting of the Naturforscherversammlung at Frankfort-on-Main Prof. Leopold exhibited microscopic sections of the youngest human ovum ever detected. The uterus of a woman, aged thirty, was removed for cancer of the cervix. The interior was carefully examined. An undoubted ovum as big as a lentil was seen, making a prominence on the surface of the uterine mucous membrane, which was hypertrophied in its neighborhood. The periphery of the ovum was bounded by a deep groove devoid of mucous membrane. After careful inquiries it was concluded that the ovum had reached the eighth day after conception. Great pains were taken when accurate drawings had been made of the undisturbed ovum to procure successful sections. The highest expectations were fulfilled. The arrangement of the villi, and the opening of the arterioles of the endometrium into the intervillous spaces came out very clearly. A full report of this remarkable case, well illustrated, will, we understand, be published. Dr. Kanthack has added to the museum of St. Bartholomew's an instructive specimen of a very early human ovum in its membranes. Histological study of the human embryo and its envelopes during the first few weeks of development is much needed. We must not rely too far on homologous structures in the lower mammals, where the anatomy and physiology of the genital tract differ in important details from the same in our species.—*British Medical Journal*.

THE SERUM TREATMENT OF TYPHOID FEVER.—The *Progrès Médical* for October 17th contains a review of a recent work on this subject by Dr. M. Funck. It is a complete monograph on the typhoid bacillus and its toxin. In this work the author gives an account of many delicate personal experiments, from the results of which he concludes that the serum of animals which are "immunized" by means of typhoid cultures possesses all the properties that, according to Pfeiffer, are to be found in anticholera serum; that is, it affords protection against typhoid infection in small doses, but not against the bacillus coli communis. Dr. Funck believes in the therapeutic action of this serum, but he thinks that experiments should be limited to the laboratory for the present, and that the serum treatment of typhoid fever is not yet sufficiently perfect to be tried on man.

This work concludes with a chapter on the pathogeny of typhoid fever. According to the author the typhoid bacilli, when introduced into the intestine, swarm in the lymphoid apparatus, where they become engaged in a struggle with the phagocytes, which destroy them, and this destruction causes the freeing of the toxin which is contained in the bacilli themselves.

TREATMENT OF LIGHTNING STROKE.—Prof. Oliver Lodge writes to the *Liverpool Post* to warn the public against the notion that a lightning stroke is necessarily fatal. It stops the vital organs, he says, but it rarely destroys them. If respiration can be maintained artificially for a sufficient time there is a fair chance that the heart will resume its suspended action, and that the stricken man will recover. The practical outcome of this is never to pronounce a lightning-struck person dead until the well-known method of resuscitation from drowning has been practiced upon the apparent corpse for two or three hours. Experience has justified this teaching both in America and in France, where it has been strenuously urged and practiced by Dr. d'Arsonval. This is a matter of great importance. Comparatively few people are killed by lightning in this country, but it seems probable enough, if we are to believe Prof. Lodge, that the number could be still further reduced if artificial respiration were practiced.—*British Med. Jour.*

ANTITOXIN TREATMENT OF DIPHTHERIA IN AUSTRIA.—Professor Paltauf has published statistics of 1,103 cases of diphtheria in which antitoxin was employed, with the result of 970 recoveries and 133 deaths, equivalent to a mortality of 12.5 per cent. He lays much stress upon the early application of the serum, for in the case of injections made on the second day of the disease the mortality amounted to 6.7 per cent, whereas in those made on the third day it amounted to 19 per cent, in those on the fourth to 23 per cent, in those on the fifth to 31 per cent, and in those on and after the sixth to 33.3 per cent. Professor Paltauf makes mention of the epidemic of diphtheria in Ischl, where in December, 1895, all those children died who

ICHTHYOL IN THE TREATMENT OF GONORRHEA.—Canova (*Thèse de Paris*, 1895; *Centralblatt für Gynäkologie*, October 10, 1896,) recommends a one- or two-per-cent solution of ichthyol as a urethral injection. He says it is painless and very efficient; in a few cases it has cured the disease in so short a time as six days.—*New York Medical Journal*.

THE CHOLERA IN EGYPT.—The weekly mortality from cholera throughout Egypt has fallen from two thousand to six hundred. It is expected that in November or December the epidemic will be entirely eradicated.

Special Notices.

THE most frequent forms of diseases of the eye are those located in the mucous membrane of the eyelids (conjunctiva). When left alone they are not only a fruitful source of annoyance and suffering, but they often endanger the existence and usefulness of the eye as an organ of sight. The frequency of these external affections of the eye has made their treatment one of the richest mines for quacks from the oldest times. All practitioners of medicine, being called upon to treat these cases, especially in the country, recognize from the formula of Palpebrine a product of no untried remedies, but entirely reliable in the treatment of external eye diseases. The Dios Chemical Company, of St. Louis, Mo., will mail free sample and literature on application.

A USEFUL PUBLICATION.—Victor Koechl & Co., importers of some of our most valuable modern medicinal preparations, such as Antipyrine, Diphtheria Antitoxine ("Behring"), Lanoline, Dermatol, Tuberculin, etc., are publishing a little monthly entitled, "Therapeutic Progress," devoted to brief reports and condensed abstracts pertaining to new remedies. Each issue contains something of practical interest to the physician. We have during the past year numbered this little paper among our exchanges, and can vouch for its practical helpfulness, and also for the ethical and scientific manner in which it is edited.

Any physician who desires to keep informed in regard to the newer remedies can receive "Therapeutic Progress" free of charge during 1897 by addressing a request to Victor Koechl & Co., 79 Murray Street, New York.

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